

Manufacturers Record

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JANUARY 1934

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THE PROSPECT

Revived hope and confidence, based upon a larger volume of business and better demand, are in evidence at the outset of 1934. Fear of economic collapse has been supplanted by courageous determination to push forward.

There has been improvement in many lines. Employment and payrolls have increased. Construction work is more active. Greater stability of industry has been effected. Production of iron and steel, cotton goods and other basic industries has increased while the banking structure of the country has been strengthened. Prices for raw material have advanced and higher crop prices have added more than \$1,000,000,000 to farm income, thereby greatly increasing the buying power of at least half of our population.

These are tangible gains that have given 1934 a better start than any year since 1929.

The South has participated very definitely in this business revival. Cotton manufacturing was the first major industry to return to the activity of more normal times. Beginning with last July, the South was the first section of the country to report a monthly increase in construction and engineering contracts, and in September set an all-time record in the volume of work planned and proposed. With cotton selling around 10 cents a pound, the South has received nearly twice as much as it received for the previous year's crop. This greater purchasing power was reflected in encouraging reports from all parts of the Southern States of increased holiday trade and a steadily improving business in staple goods.

Other countries report better business and a better outlook. The trade current seems to be setting in again.

Viewing the situation from another side, problems of serious import have appeared as the campaign for prosperity has progressed. Planned economy has brought with it an apparent menace to individual initiative, which has been the mainspring of progress in the past. Will the State control future activities? Does Government partnership in banking and industry mean Government control? Is Government competition with private business a permanent thing, or is it intended to be of temporary duration to point the way to what is regarded as a better kind of business conduct?

These are some of many questions with which thoughtful men are concerned. Recognizing them implies no intention to carp or criticize. To ignore them is foolish.

The Administration wants and needs the intelligent application of the brains of America to help in doing whatever should be done for material progress and for the preservation of the best ideals of America.

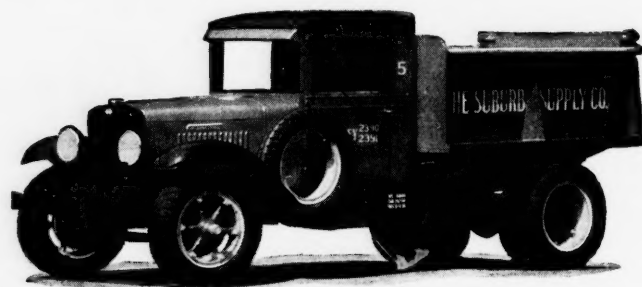
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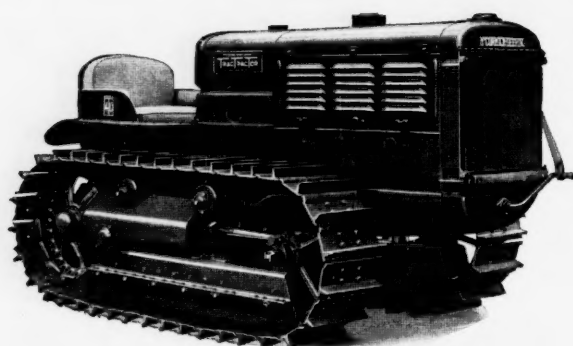
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Dual rear wheels extra

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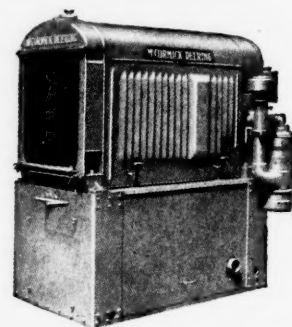


McCORMICK-DEERING TracTractor

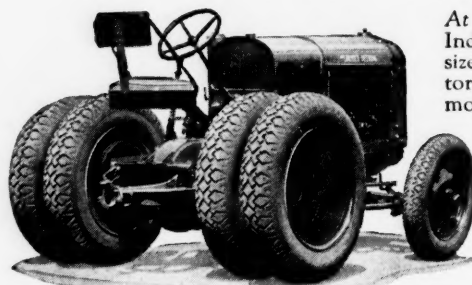
The McCormick-Deering T-40 TracTractor, shown above, is a big 6-cylinder, 5-speed unit capable of operating heavy tools in the hardest kind of work. The T-40 is also available with a Diesel engine. For lighter work, there is the Model T-20 TracTractor.

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Above: McCormick-Deering Power Units are available in four sizes, including a Diesel power unit. They supply low-cost, dependable power for many kinds of stationary work.



At Left: McCormick-Deering Industrial Tractor, built in three sizes. These wheel-type tractors have been the standard of mobile industrial power for years. They have a great capacity for work. Available with pneumatic tires, solid rubber tires, or steel wheels with lugs.



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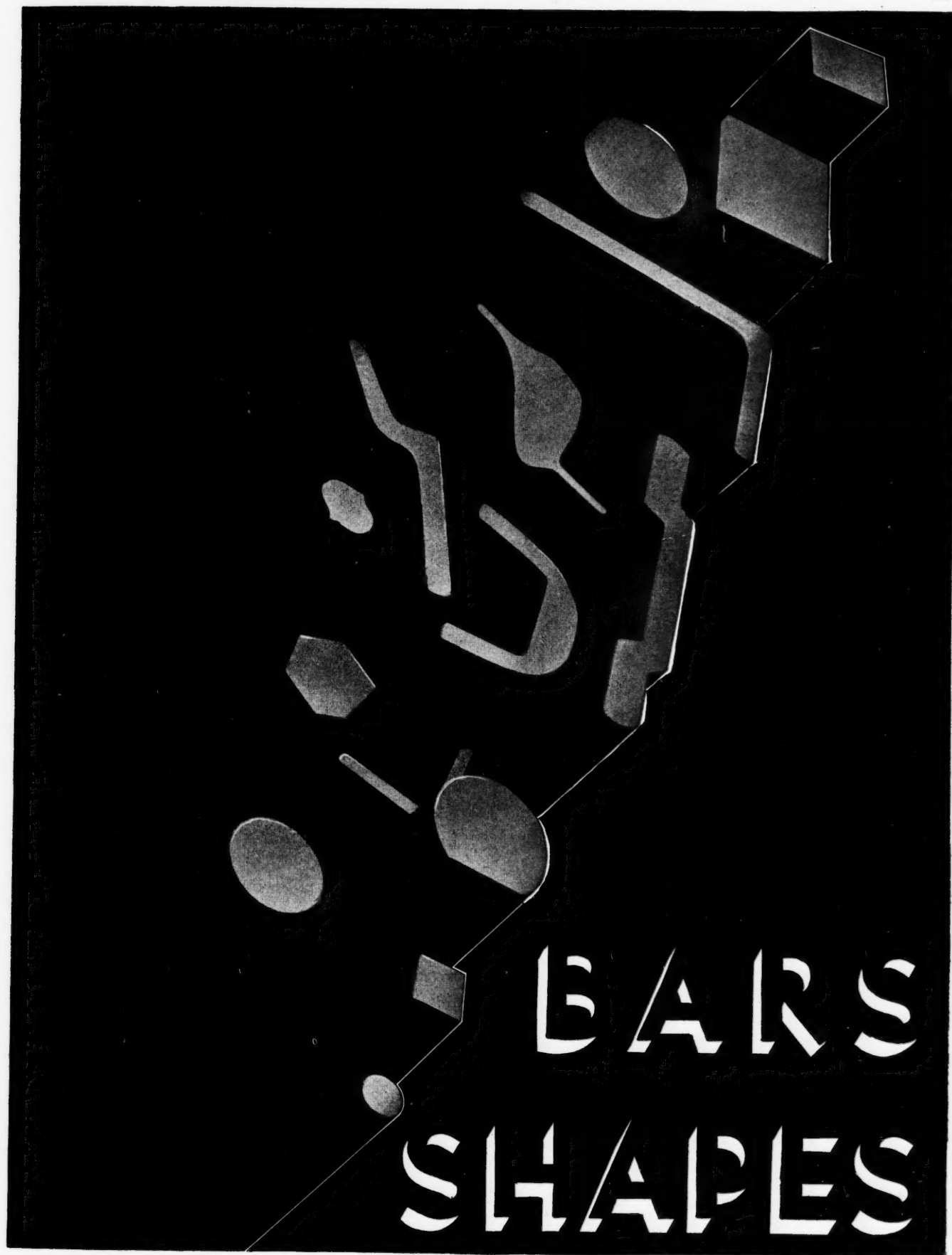
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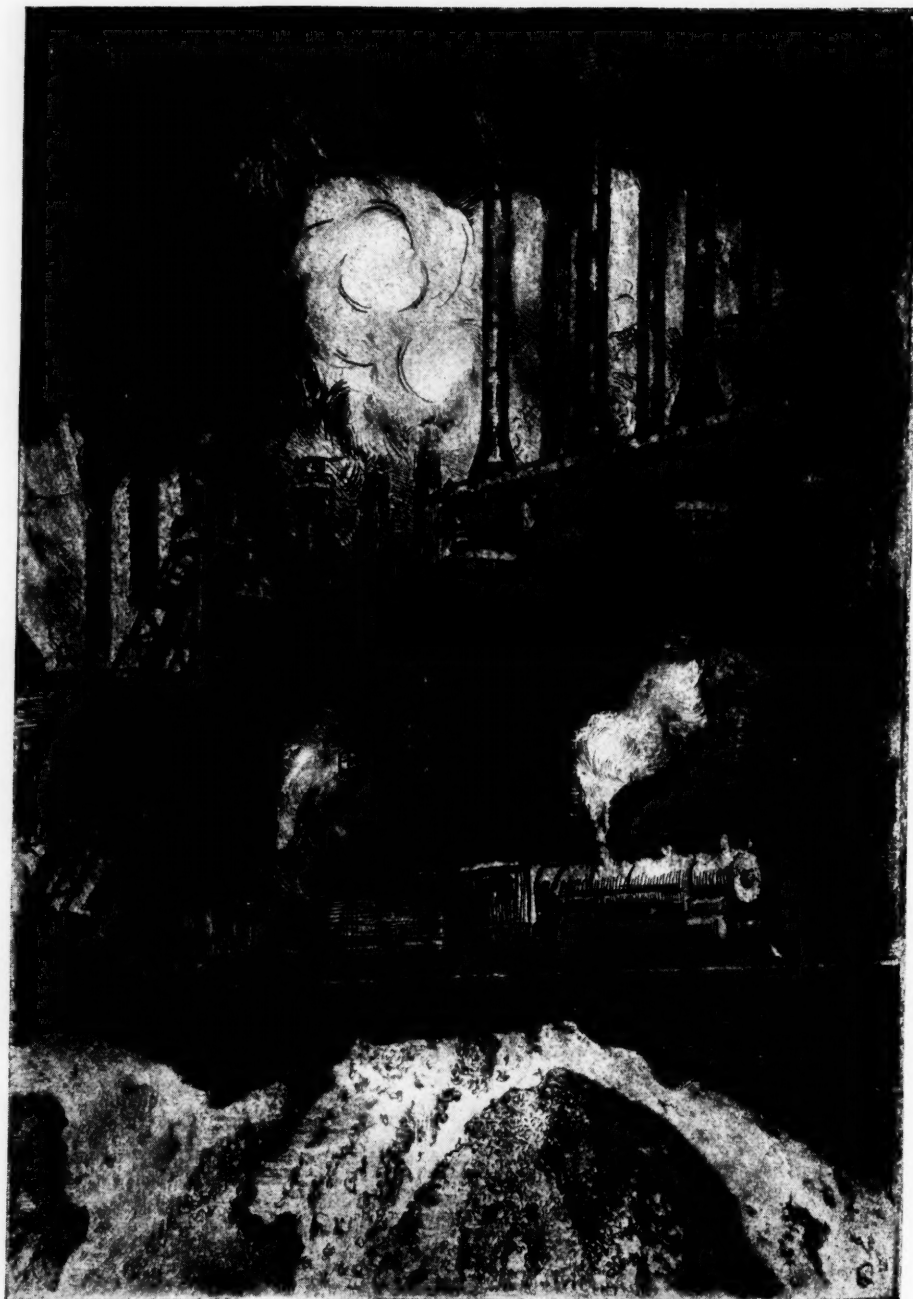
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JANUARY NINETEEN THIRTY-FOUR

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1934**

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MANUFACTURERS RECORD

Devoted to the Upbuilding of the
Nation Through the Development
of the South and Southwest as the
Nation's Greatest Material Asset

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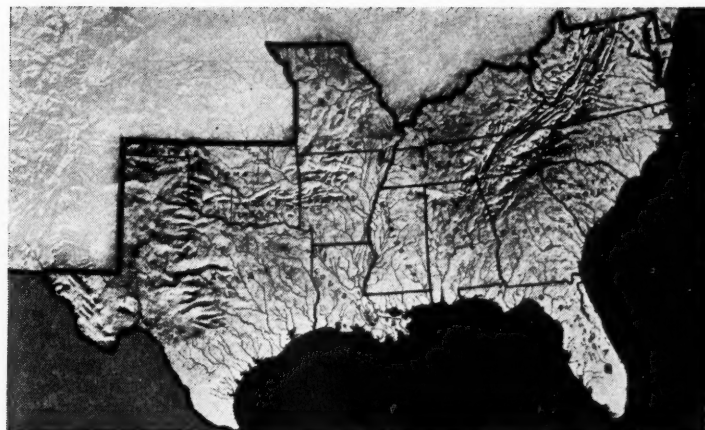
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JANUARY NINETEEN THIRTY-FOUR



The South has 31.8 Per Cent of the Land Area and 33.6 Per Cent of the
Population of the United States

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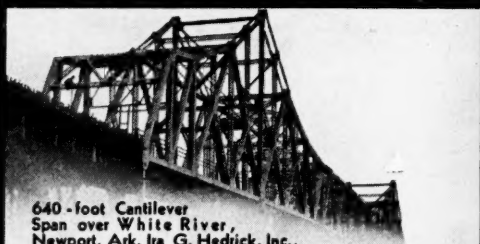
720-foot Cantilever Highway Span over White River, Clarendon, Ark., manufactured and erected by us. Ira G. Hedrick, Inc., Consulting Engineer, Austin Bridge Co., General Contractors.



766-foot continuous span over Tennessee River, Scottsboro, Ala. Kansas City Bridge Co., General Contractors.



766-foot continuous span and four 200-foot spans over the Tennessee River at Whitesburg, Ala. Hardaway Contracting Co., Gen'l Contr's. We manufactured and erected this steelwork, as well as the Scottsboro Bridge above.



640-foot Cantilever Span over White River, Newport, Ark. Ira G. Hedrick, Inc., Consulting Engineer, Missouri Valley Bridge & Iron Co., Gen'l Contr's. We furnished a duplicate of this span for White River Bridge at New Augusta, Ark.

• Manufacturers Record •

GOVERNMENT POWER COMPETITION

THE electric light and power industry is owned by millions of security holders throughout the United States. They are directly and indirectly concerned about their investment and the efforts being made to bring about public ownership of power plants, which will compete with the private utilities in which they have a proprietary interest.

Coincidental with the announced purpose to extend national government ownership and operation of such plants, advocates of municipal ownership are proposing a greater tax on the profits of existing private companies in the power field. In addition to the 3 per cent Federal tax on gross earnings, there is now a movement in several States to levy taxes up to 7 per cent on the gross earnings of electric companies. As the passing on of these taxes to customers is prohibited, necessarily they will have to come from security holders, employees, or the upkeep of the various systems.

Those who believe in individual enterprise as the soundest basis on which American progress can rest, will find encouragement, however, from the knowledge that in spite of the agitation in some quarters for public ownership, only 84 municipal plants in the United States, serving a population of less than 117,000, were established in the five years from January 1, 1928, to January 1, 1933, while communities which sold or leased municipal facilities to private companies during the same period totaled 612, serving a population of 605,000. This change from public to private operation shows that the efficiency of private companies is recognized.

Current sold during 1932 by the country's commercial power plants amounted to 62,147,695,000 kilowatt-hours and municipally owned plants sold 3,748,280,000 kilowatt-hours, or less than 6 per cent of the total.

Commercial power plants in the South in 1932 sold approximately 13,440,000,000 kilowatt-hours of elec-

tricity, and municipally owned plants 560,000,000 kilowatt-hours, or about 4 per cent of the total output.

It is of further interest that in the South during the five year period named, while there were established 28 municipal plants, all in small communities, there were 171 power and light enterprises changed over from municipal to private operation, indicating that in these cases the decision was that public ownership did not pay.

ELECTRIC LIGHT AND POWER INDUSTRY IN THE SOUTH

(Number of Establishments and Generating Stations Reported by the Census Bureau)

States	Establishments			Generating Stations
	Commercial	Municipal	Total	
Alabama	16	14	30	39
Arkansas	21	13	34	70
Florida	10	31	41	92
Georgia	15	52	67	81
Kentucky	19	9	28	61
Louisiana	19	28	47	88
Maryland*	23	16	39	35
Mississippi	6	27	33	99
Missouri	51	53	104	129
North Carolina	37	66	103	96
Oklahoma	23	69	92	108
South Carolina	21	22	43	47
Tennessee	29	17	46	66
Texas	30	34	64	234
Virginia	32	15	47	80
West Virginia	37	4	41	41
Total	389	470	859	1,366
United States	1,627	1,802	3,429	4,350

* Includes District of Columbia and Delaware.

The electric light and power industry, as a structure with roots in virtually every community of the United States, has assets of \$17,000,000,000 owned by millions of investors who are owners in their own right and also owners through their insurance policies and bank deposits.

While mismanagement in some instances is given as a reason to turn over this industry to national or local government ownership, thoughtful people are not likely to believe that such a change is desirable, when through political favoritism, as has often happened, extravagance and waste are likely to increase and the taxpayer will have to pay.

The electric light and power industry has weathered

the storm of depression far better than most others. Its rates for service have been growing steadily less. Since 1912 the average cost of electricity has been downward. Rates were being lowered when other prices rose during the boom period, and have decreased 17 per cent since 1929. Also, it is an industry that while adding immeasurably to the comfort of human life has been an active factor in the development and progress of the communities it serves.

The wisdom of the national government's power op-

eration at Muscle Shoals is questioned by investors whose interests are vitally at stake. Observers of the situation point to the fact that these investments are just as sacred as those in railroads and other forms of industry, whose bonds and shares are held by institutions and individuals everywhere.

Regulation of public utilities is necessary. Wise management recognizes this fact, but that is something different from government or municipalities taking over or attempting to run things which are better off in private hands.

Number and Capacity of Prime Movers in Southern Light and Power Plants

States	Total Prime Movers		Steam Turbines		Steam Engines		Internal Combustion Engines		Hydroturbines		Electric Generators	
	No.	Horsepower	No.	Horsepower	No.	Horsepower	No.	Horsepower	No.	Horsepower	No.	KW. Capacity
Alabama	84	925,878	18	315,470	8	8,624	30	7,535	28	594,249	87	649,273
Arkansas	165	207,035	42	88,771	33	12,380	80	16,376	10	89,508	164	152,798
Florida	240	534,575	66	457,820	25	7,830	132	47,645	17	21,280	232	363,052
Georgia	194	748,092	34	184,585	37	8,028	21	3,202	102	552,277	193	474,962
Kentucky	145	455,367	59	302,241	27	8,316	41	3,470	18	141,340	145	339,771
Louisiana	220	467,084	42	426,042	6	2,685	172	38,357	220	328,623
Maryland*	98	1,226,753	53	813,866	1	250	34	10,487	10	402,150	98	857,067
Mississippi	207	91,254	40	58,207	22	5,315	145	27,732	213	65,669
Missouri	337	1,021,731	90	748,042	42	18,580	183	49,896	22	205,213	335	716,532
North Carolina	210	1,380,658	45	463,350	14	4,796	32	8,258	119	904,254	214	1,004,687
Oklahoma	301	470,578	65	392,403	41	23,329	188	52,293	7	2,553	300	343,190
South Carolina	137	939,956	22	193,874	12	3,422	11	2,215	92	740,445	146	642,856
Tennessee	168	578,618	49	266,307	29	17,655	37	5,017	53	289,639	168	425,541
Texas	614	1,326,973	129	1,161,311	54	18,065	400	118,574	31	29,023	611	967,644
Virginia	208	568,468	53	427,342	8	1,439	36	9,227	111	130,460	207	409,468
West Virginia..	106	731,400	52	638,441	11	2,437	25	6,739	18	83,783	105	538,825
Total	3,434	11,674,420	859	6,938,072	370	143,151	1,567	407,023	638	4,186,174	3,438	8,279,958
United States..	11,182	47,965,990	2,821	32,904,258	1,300	648,501	3,276	866,312	3,785	13,546,919	11,108	34,624,068

* Includes District of Columbia and Delaware.

EMPLOYEE RELATIONS

A RECENT survey conducted by the National Industrial Conference Board shows the extent to which wage earners are availing themselves of the right to bargain collectively through representatives of their own choosing, as provided in the National Industrial Recovery Act. The number of employee-representation plans have increased greatly in recent months.

Of 3,314 manufacturing and mining concerns which employ 2,585,000 wage earners, or about one-fourth of the total number engaged in these industries, 45.7 per cent of the workers deal with their employers individually, 45 per cent through works councils or employee-representation plans, and only 9.3 per cent through organized labor unions. Over two-thirds of the reporting companies deal individually with their employees but many of these concerns are comparatively small. Employee-representation plans predominate in the larger companies and labor union agreements are most prevalent in medium sized concerns. Since June 16, 1933, when the Recovery Act went into effect, the 3,314 concerns reported that 400 employee-representation plans and 174 labor union agreements had been established.

In summarizing the results of the survey, the Conference Board said:

"Two definite conclusions may be drawn. In the first place, it is clear that individual bargaining has not in any way been eliminated by Section 7 (a) of the Re-

covery Act. There are too many companies in which this method has proved satisfactory over a long period of years to permit of its elimination. Many of these companies, moreover, are not of sufficient size to call for a representation plan. It seems likely, therefore, that individual dealing will remain the basis of employer-employee relations in a majority of industrial establishments, especially since a large proportion of such establishments is in the small-size class. The second conclusion is that employee-representation plans have expanded greatly, both in number of companies affected and, particularly, in number of employees covered."

In 1919, there were 196 factories with 403,765 employees which operated under the works council or employee-representation plan; in 1932 there were 767 plants with 1,263,000 employees under the works council system. In 1932 the total membership of the American Federation of Labor was 2,532,000, of which not more than half were employed in factories and mines. The membership of factory employees in works councils equalled the union membership in industries.

The works council system regards a factory as a community where all workers have a common interest; under labor union organization each craft is independent of the others. A dozen unions may be operating in a single factory. The American Federation of Labor is opposed to the expansion of the works council method of collective bargaining. The success of the works council plan is said to have cut into the ranks of organized labor whose membership at the beginning of 1933 was but half of what it was during the War. However, under the Recovery Act, organized labor doubled its membership in six months.

HIGHWAY MAINTENANCE

THE annual convention of the American Road Builders' Association to be held at the Stevens Hotel in Chicago, the week of January 22, will be one of the most important meetings of highway officials, road builders and users in many years. Plans will be formulated to place before the people of the nation the vital necessity of carrying on the extension of improved highways financed by funds obtained largely from the users of roads.

Motor vehicle revenues, license fees, gasoline taxes, etc., aggregating about a billion dollars a year, make up these funds which are being diverted at an alarming rate for miscellaneous government expenditures. This practice is unsound and unjust to motor vehicle owners who are thus singled out for special tax levies merely because "the money is easy to get." Every dollar collected by the Government and its subdivisions from motor vehicle owners is needed to save the capital investment and completion of missing links in the good roads of the nation. Unless the roads are properly maintained they will deteriorate rapidly necessitating an enormous expenditure to rebuild them.

When the gasoline tax was first applied some years ago, the reasonable rates of 1 cent a gallon were considered fair to the motorists who were benefited from the building and maintaining of highways. But in recent years these special taxes have been raised three to eleven times and have gone beyond reasonable limits with the result of breeding tax evasion and gasoline bootlegging. The motor vehicle owner is now subject to unjust class taxation. He is paying twice in general taxes and again through special automobile taxes. In some States the revenue from gasoline and automobile taxes is 150 per cent of all monies spent for roads and about 100 per cent for the nation as a whole.

Because of motor vehicle tax diversion, other sources of revenue have had to be drawn upon to keep up road building and maintenance. Only 70 per cent of the income from special taxes collected from motor vehicle owners was actually used for roads in 1932, the balance going into general funds contributed by all taxpayers.

"While there are 147,000 miles of paved roads in the United States," says H. C. Whitehurst, president of the American Road Builders' Association, "there are only 868,000 miles of the main highway systems that have been improved in any way, and 2,172,000 miles which have never been touched by the road builder. It has been found that driving on a paved road is 2.8 cents per mile cheaper than an unimproved one. Thus, if the State highway system were improved in their entirety, the saving to the general public would amount to \$1,820,000,000 per year. This figure may be compared with the amount spent for construction and maintenance of all classes of roads, both city streets and rural highways, in 1930, which was \$1,543,769,000."

Only 17 per cent of the highways, that can be classed as improved in any way, are paved. Only 28

per cent of the total road mileage of the country has been improved and less than 5 per cent of all the roads have been paved. While we have made remarkable progress in road building in the past 15 years we have some distance to go in good roads development to secure maximum efficiency for highway transport.

One of the most shortsighted policies that can be followed is to divert motor vehicle revenues to other than highway purposes.

IRON AND STEEL OUTLOOK

LAGGING activity in the heavy and capital goods industry group has been one of the main obstacles to economic recovery. Therefore, the recent improvement in the iron and steel industry is of great importance. Contrary to seasonal trend, the year closed with increased activity by steel producers. While the more hopeful outlook is in the lighter steel lines, Government advances in connection with public works and railroad rehabilitation programs will off-set the inadequate private investment in heavy steel products.

Walter S. Tower, executive secretary, American Iron & Steel Institute, states that the coming months should bring a measure of improvement in consumption of steel. This is based on signs of expanding demand, together with a stabilized price structure and more favorable marketing conditions ushered in by the Steel Code, all indicating that the low point of the depression has been passed.

Mr. Towers points out that "for the first time in many years the art of salesmanship is becoming a factor in selling steel. During recent years, steel has been sold in too many cases on secret concessions in price, credit, or terms. Now that these unfair competitive weapons are eliminated, the emphasis in selling has been placed where it should be, namely, on quality, service to consumer, delivery convenience and similar points. All this makes for a healthy condition of competition which is no less keen and aggressive than formerly.

"Under the code, a fair measure of price stability is likely to prevail because of the open price provisions. Reasonable stability is in the interest of consumers as well as of producers of steel. Large increases in costs have been assumed by the steel industry, in compliance with the Steel Code, and all of which have only in part been countered by moderate advances in steel prices."

Output of steel ingots in 1933 approximated 23,000,000 tons compared with 13,400,000 tons in 1932, an increase of 73 per cent. The industry operated during 1933 at an average of 32 per cent capacity compared with 20 per cent in 1932. The number of men on the pay rolls of the country's steel mills under the Steel Code is now practically the same as in the boom year 1929 when operations were at 85 per cent capacity. It is estimated that should steel plant operation rise to 70 per cent of capacity 125,000 additional employees would be needed.

PROPOSED AMENDMENTS TO SECURITIES ACT

By
Enos S. Stockbridge
Of The Baltimore Bar

AT this session of Congress there will be a concerted effort made to materially amend the Securities Act of 1933, adopted last May during the period of financial and industrial crisis. The time is appropriate, therefore, to consider certain phases of the Act, and briefly refer to some of the substantial grounds for criticism.

Of course, the Securities Act is, to a large extent, a new departure in this country. Many states have adopted so-called Blue-Sky laws; but these, in general, go no further than to require a security to be submitted to certain constituted authorities before they may be offered to the public. The Federal Securities Act, however, imposes a direct liability on the issuing corporation, the individual members of its Board of Directors, the officers who sign the Registration Statement required to be filed with the Federal Trade Commission, auditors, engineers and others whose certificates as to financial condition, properties and other matters are filed with the Registration Statement, and upon the underwriters and other persons selling the issue.

There can be no question but that in order for industry to operate and progress, it must have available abundant sources of capital. For example, it has been stated that within the next eighteen months several hundred millions of dollars of corporate securities will mature, which will either have to be refunded through the issuance and sale of new securities, or receiverships are inevitable with their attendant losses and the social dislocation resulting from the reduction of employment.

An examination of the Registration Statements on file with the Federal Trade Commission since the adoption of the Securities Act, will disclose that these statements cover, for the most part, new enterprises; and probably the two greater classes of these enterprises are comprised of mining corporations and companies engaged in the manufacture, sale and distribution of beer and liquor. So far as the writer is aware, there has been no application for regis-

tration under the Act of what might be called major financing. To a large extent, perhaps, this has been due to prevailing financial conditions, but by no means entirely so. Generalized statements, therefore, that the Act has not acted as a bar to legitimate financial operations, pointing to the dollar volume of applications filed for registration are misleading. Large American business organizations are complicated corporate structures—a situation largely due to the existence of varying statutory regulations of corporations in the forty-eight states—with a parent body at the apex owning all or various proportions of several subsidiaries, some of which may in turn, like the proverbial fleas, have their own subsidiaries. If in the application for registration or the prospectus, any misstatement or omission of a "material" fact occurs, then the persons made liable by the Act may be held liable by any purchaser to the extent of his loss. The difficulty is not so much with respect to misstatements, but in complicated corporate relationships, the danger of an omission which may later be determined to be "material" (the word is not defined by the Act) is ever-present and extremely serious.

There are those, of course, who resent any interference or supervision by the Government in this field, but the abuses have been so great that careful and reputable firms welcome the adoption of regulations which will, to a large extent, at least, eliminate the unscrupulous operator. But in the endeavor to curb the unscrupulous, care must be taken not to dam the tide of necessary financial operations or throw around them such restrictive conditions that industry will be seriously embarrassed.

A graduate of Amherst and of the University of Maryland, Mr. Stockbridge in his practice of Corporation Law has had exceptional experience in meeting the problems of investment and finance. The amendments to the Securities Act which he proposes merit serious consideration. — Editor, MANUFACTURERS RECORD.

A Thoughtful Presentation of Reasons for Amendments Believed Necessary to Open the Way to a Freer Flow of Capital Into Private Enterprise

There are three features of the Securities Act which could be modified without impairing its strength to any material degree and which would, in a large part, meet the thoughtful criticisms that have been made. These are:

1. The Securities Act gives to the purchaser of a security a right of action, in the event he sustains a loss, resulting from the purchase of a security, if there has been any misstatement of fact or the omission to state a material fact in the Registration statement filed by the issuer with the Federal Trade Commission, or in the prospectus. It would seem elementary that a purchaser, seeking to recover from an officer or director of the issuing corporation, the underwriters and brokers selling the securities, or an auditor who has certified to the financial condition of the issuer, should have read the Registration Statement or Prospectus before he made the purchase and should have relied on conditions disclosed thereby in making the purchase. But strange to say, the Act permits recovery by a purchaser even though he bought the security without ever having seen the Registration Statement or the Prospectus, and, therefore, without having been deceived or misled to the slightest degree by statements in or omissions from documents he had never seen, and on which, consequently, he did not rely. This seems not only unjust to those made liable by the Statute, but absolutely indefensible.

In order that a purchaser should be entitled to the protection afforded by the Act, he should have himself exercised the ordinary prudence of at least reading that which the law requires the issuer to publish regarding the security offered. Why should the statements be required at all if they are not to be read and become the basis on which the purchase is made?

The Act should be amended so as to require a purchaser, seeking to enforce the liability imposed by the Act, to show that he had read either the Registration Statement or the Prospectus, and that the purchase was made as a result of the information obtained from such statements. Such an amendment would impose no undue hardship on the purchaser and will have, to some degree, the bene-

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WAGE DISCRIMINATION

A QUESTION of pronounced interest to the South is the matter of wage differentials under the various codes. The minimum rate set in many instances is a 50 to more than 100 per cent increase in the South, while for similar employment in the North the rates were practically unchanged. This is grossly unfair to the industrial South for in supplying a wage scale differential out of all proportion to lower living costs in this section its natural competitive advantages for manufacturing are artificially and arbitrarily set aside in favor of Northern producers.

Industry is trying to adjust itself to code operation and everywhere there is a spirit of cooperation to lift us out of the depression. However, the development of the South has been due, aside from the initiative of those concerned in it, to inherent natural advantages of mild climate, low plant cost and maintenance, abundant raw materials, adequate power and transportation facilities. These advantages, it appears, are to be nullified by the establishment of wage differentials, which will hamper present manufacturing activity, industrial development and the fullest utilization of Southern resources in the future.

The MANUFACTURERS RECORD has received many protests from Southern producers against a policy that increases labor costs beyond what has been the usual differential and beyond possibility of profitable operation. There has been no question about the willingness to raise wages consistent with ability to meet competitive costs nor cooperation in making a success of the Recovery Program.

In reply to a request for his views on the subject of wage differentials, George P. Utley, president Craddock-Terry Company, Lynchburg, Va., one of the largest shoe manufacturing concerns of the country, writes:

"We believe in a minimum wage and shorter hours as outlined by the NRA. We do believe, because of climatic conditions, because of fewer experienced machine operators, etc., that the wage differential should be greater between our section and that of Northern industrial sections.

"We believe that apprentices in certain industries should be worked longer as apprentices and a larger percentage allowed as to the total employed."

Another manufacturer in one of the

major industrial groups of the South, Jas. T. Carter, of the Epperson Lumber Company, Lynchburg, outlines his views as to the working of the lumber code and its effect on the lumber manufacturer in his territory. He writes:

"Prior to the enactment of the code, common labor at the sawmills and planing mills were being paid an average of about 15 cents per hour. They were working 10 hours a day. As there was an abundance of food to be had at low prices, the workers earned enough to live in some degree of comfort. Most of the workers live in the neighborhood of their own farms or farms of relatives, so if regularly employed they had ample spending money. A large part of their food was supplied from their gardens and they had shelter and fuel. The mills were quite busy during June, July and August, as lumber yards throughout the country anticipated higher prices and bought freely.

"Since the code went into effect, the lumber manufacturers are required to work their men on a five-day week basis, 8 hours per day, at 24 cents per hour. This has increased the production price of pine and oak lumber in this part of the country about five or six dollars per thousand feet. The consumers of lumber, having anticipated their needs, are not in the market for more lumber at this time unless it be some material required for immediate emergency use. The result is that about 80 to 85 per cent of the sawmills in this part of the country have been closed down. Manufacturers are not disposed to stock up any further for they are afraid they cannot sell the lumber at a profit on the basis of 24 cents an hour for labor.

"We believe that the manufacturers, almost to a man, are supporting the lumber code rules and we hope the program will benefit all. We were opposed to fixing the price of labor at 24 cents per hour as we feared that this would bring about exactly the condition which now prevails. Our sawmill and planing mill employees take the same view we take. They would rather have more work at 15 cents or 16 cents per hour than 24 cents an hour and no work, the condition that prevails today."

S. Duncan Black, president, The Black & Decker Mfg. Co., Towson, Md., with branches in principal cities and foreign countries, gives his opinion of the NRA program as it affects the portable electric tool manufacturing industry. In a general way he is in favor of the "New Deal." Referring to the fact that the business of his company is more Northern than Southern, he says that "consideration should be given to the special situation prevailing in the South, due to climatic conditions," but he does not think "that the appeal of the South

should be based primarily on cheap labor." He believes that the small industry will be able to operate to the fullest advantage under the code system, certainly as it applies to the electrical tool industry, and that "the adoption of higher codes of ethics or fair trade practices, is a step in the right direction. Instead of having to be constantly on guard against unfair practices, more time will be available for real constructive effort."

Citing that the Iron and Steel Industry code recognizes the geographical wage differentials that have existed in the past, W. A. Rigsby, secretary and treasurer, Lombard Iron Works & Supply Co., Augusta, Ga., says:

"I do not believe that any section has responded more enthusiastically to the requirements of the Industrial Recovery Act than has the South, nor paid more heavily for their response.

"I feel that any rate of wages higher than maintaining a differential of 33⅓ per cent in favor of the Southern States would result in a defeat of the Administration's purpose, in that many small industries, unable to compete with the larger, more efficient and more highly merchandised units, would find it necessary to discontinue business, disrupt conditions in the communities where they are at present employing men, and defeat the very purpose of the Administration in the present emergency."

Referring to the fundamental difference in living costs and climate in the South, Harold S. Weil, secretary, Kohn, Weil & Simon, Inc., hat and glove manufacturers, New Orleans, La., writes:

"To arbitrarily legislate that Southern labor should be paid the same hourly wage as those of less fortunes in the North, is to either offer Northern labor a discount, or to place a premium on Southern labor. This is a disadvantage to the South and will mean forcing manufacturing to the North where labor will be found cheaper on the unit basis."

"A differential should be agreed upon on a flat percentage basis. It should be on the sportsman's 'handicap' idea—and effort to equalize the advantages and disadvantages, and then let the best man win."

Frank W. Cox, vice president and general manager, Eureka Lumber Company, lumber manufacturers, Washington, N. C., writes:

"The lumber industry in some other sections has been granted wage scales which gives them an advantage over Southern lumber manufacturers. The minimum wage scale in the South is 24 cents per hour. The minimum in the North is 42½ cents per hour. Government statistics show that in the

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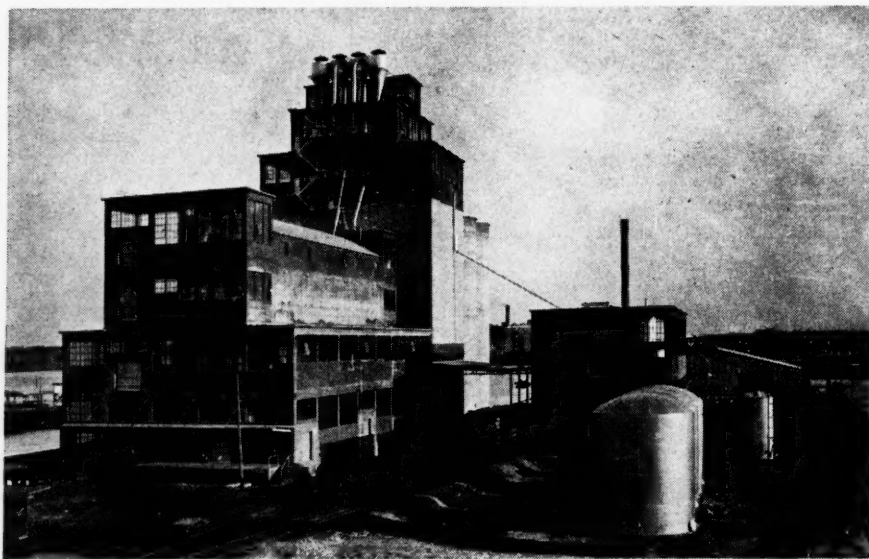
\$76,000,000 INDUSTRIAL EXPANSION

INDUSTRIAL contracts awarded during 1933 in the South aggregated more than \$76,000,000. The substantial investments in new enterprises and the number and variety of expansion and improvement programs undertaken during the year indicate an upward trend in diversified manufacturing development that is most encouraging. It is substantial evidence of the South's advantages as a manufacturing region.

The significant feature of the South's industrial development last year and the development now under way is the establishment of relatively small plants in a wide variety of lines and the expansion of existing factories. There were of course several great industrial enterprises started in 1933 but in the main the money invested in manufacturing in the South last year was by relatively small concerns.

Among the major manufacturing enterprises begun last year in the South are the \$7,000,000 plant of the Southern Alkali Corporation at Corpus Christi, Texas; the Mathieson Alkali Works \$7,500,000 plant near Lake Charles, La.; a \$3,000,000 sulphur plant of the Freeport Sulphur Co. in Louisiana; a \$3,000,000 bromine plant of the Ethyl-Dow Corporation near Wilmington, N. C., and a \$5,000,000 oil refinery for the Pan-American Petroleum and Transport Co. at Texas City, Texas. Other oil refineries are

Soy Bean Processing Plant, Portsmouth, Va.



being established in the Southwest involving in the aggregate several millions of dollars.

Lesser manufacturing plants established in the South in 1933 include a \$500,000 soy bean processing plant at Norfolk, Va., by the Allied Mills, Inc.; a \$250,000 pipe plant at Bessemer, Ala., by the United States Pipe & Foundry Co., and hundreds of others in the lower valuation group. The revival of the brewing industry also is responsible for the location in the South of many new enterprises.

Iron and Steel Products Increased

The Southern iron and steel industry shared in the increased activity and buying movement that developed during the year. Operations were resumed in many of the plants that had been on short time. With the opening of blast furnaces, ore and coal mines, rail and other departments employment was given to several thousand workers.

Lumber manufacturing found itself in a better position with some increase in orders and under the lumber code operating conditions were stabilized in the prevention of over-production and accumulation of excessive stocks.

Textiles Gain

Cotton manufacturing was the first major industrial group to emerge from the depression. The marked increase in cotton manufacturing activity and the return to more prosperous conditions featured the South's textile industry last year.

During 1933 modernization and expan-

**Number and Variety of
New Enterprises Estab-
lished in South in 1933
Feature Substantial
Manufacturing Devel-
opment Despite Ad-
verse Business Con-
ditions**

sion programs were undertaken by many mills throughout the South. Improvement of facilities, especially power plants, predominated in the rehabilitation work which included replacement of obsolete equipment with the latest types of high-speed units, re-arrangement of machinery layouts, and installation of modern lighting and humidifying systems. Many garment factories, hosiery mills and other manufacturing enterprises allied with the textile industry were established and expanded. The provisions in the textile code to restrict the building of new plants or expansion of productive capacity led to the sale of several mill properties in the South which are being modernized and put into production.

At the beginning of 1933, there were 31,254,000 cotton spindles in place in the mills of the United States. The South had 19,101,000 spindles, or 61 per cent. During the following twelve months, the South increased its spindles by 60,000 but there was a decrease of 431,000 spindles in the rest of the country. The South now has over 62 per cent of the 30,882,000 cotton spindles installed in the United States. In 1933, the South reported 67,057,000,000 active spindle hours, or 76.6 per cent of the total spindle activity of all the cotton mills of the country which amounted to approximately 87,485,000,000 spindle hours. Last year cotton mill operations reached the highest point in the South since 1929.

Rayon manufacturing is centered in the South which is now producing 70 per cent of the nation's rayon output. Several important expansion programs were undertaken by the leading rayon concerns. The Tubize Chatillon Corporation expended about \$3,000,000 for additions at Rome, Ga., and Hopewell, Va. Other investments in new power plants and facilities during the year were made by the Du Pont Rayon Company at Old Hickory, Tenn.; Viscose Company at Roanoke, Va., and Parkersburg, W. Va.; American Enka Co., Asheville, N. C.; American-Bemberg Corporation and the American Glanzstoff Corporation near Elizabethton, Tenn., and Celanese Corporation, Amcelle, Md.

Diversified Industrial Progress

The South has become the dominant cotton and rayon manufacturing region of the United States and also is fast becoming a leader in the oil refinery industry. The chemical industry now well established in the South is destined to be centered in this section. With its abundance of raw materials, available fuel and power and adequate transportation, the South is rapidly drawing chemical manufacturing plants, some of the largest of these industries being now under way and in prospect. The making of white paper from Southern pine, as an extension of the Kraft paper industry which is now largely centered in the South, is the latest manufacturing development to attract attention. Plans are being pushed to establish two large plants for this purpose in the Southeast. Continued expansion of the tung oil industry is reported in Florida and Mississippi.

There has been sound development of the food processing industries in the South during the past few years. Slaughtering and meat packing, canning and dairying are well established but do not begin to supply the needs of the South.

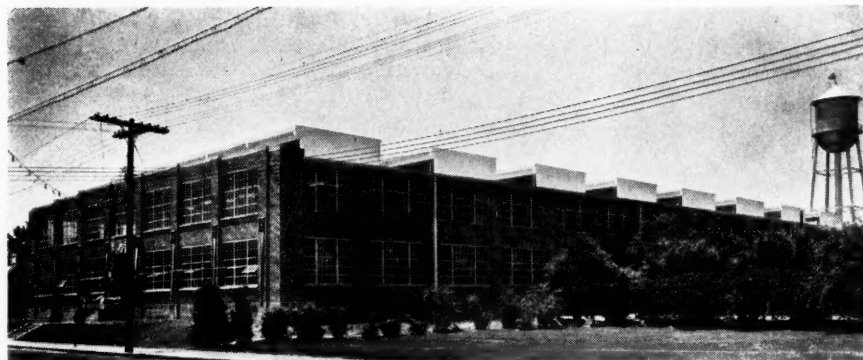
It is noteworthy that in this development in which as stated more than \$76,000,000 are being invested, industries of widely diversified character are included. The following list is indicative:

Alkali products	Grain elevators
Aluminum utensils	Hames and plow handles
Asphalt	Hides and furs
Automobile bodies and parts	Hosiery
Barrel staves	Ice cream
Beer	Ice manufacturing
Bottling plants	Iron and steel products
Boxes	Leather
Bromine	Lime
Building materials	Lumber
Clothing	Machine parts
Cold storage	Meat packing
Confectionery	Naval stores
Cooperage	Oil field supplies
Cosmetics	Oil refineries
Cotton compresses	Pants
Cotton gins	Paper
Cotton manufacturing	Peanut shelling
Cottonseed oil mills	Pencils
Dairying	Rayon weaving
Distilling	Shirts
Fertilizer mixing	Shoes
Flour and feed mills	Soap
Food processing	Soybean processing
Food products	Stone work
Foundries	Stoves
Fruit and vegetable packing	Sulphur
Furniture	Tin cans
	Woodworking

Illinois Central Reports 40 Per Cent Increase in New Plants

Commenting on the 1933 industrial development in the Mississippi Valley to the Gulf along the Illinois Central System, Mark Fenton, general industrial agent, says:

"The fourth year of the worst depres-



Reliance Mfg. Co., Columbia, Miss.

sion this country has ever experienced has brought to the Illinois Central System a new crop of industrial plants greater by 40 per cent than the showing made in 1932 which is a decided index of the trend that American industry is taking in the flight from the congested East to the new industrial frontiers that are rapidly being established in the Middle West and South in proximity to abundance of raw materials so plentiful throughout the Mississippi Valley. These new plants brought a substantially increased business to the Illinois Central System as compared with new enterprises established in 1932, and with a decided augmentation of buying power in many communities. The new industrial acquisitions alleviated many economic and social maladjustments at some points where the ravages of the depression were becoming rather pronounced.

"The best evidence that decentralization is actually in progress is in the fact that there were 45 diversified classifications among the 1933 newcomers on the Illinois Central System.

"Repeal brought forth the development of distilling and brewing operations in such Illinois Central cities as Peoria, Pekin, and Louisville. The auxiliary industries to the distilling and brewing trade, particularly those engaged in the manufacture of glassware, woodworking products, cartons, boxes, paper products,

etc., helped to increase the new classifications by responding generously to argument of economic advantages afforded in Illinois Central territory where distribution to the trade is effected expeditiously and economically.

"But the development during the past year accruing to the Illinois Central consequent upon Repeal is relatively small as compared to the major industrial development for that year. New textile operations of a major character have been very much in evidence in 1933 in Kentucky and Mississippi at Illinois Central points. New oil establishments played a part in decentralization. Canning operations, ready-to-wear, brooms, chemicals, building materials, alfalfa meal, feed, shoes and furniture are among the new lines of manufacturing embraced in the industrial roster of the Illinois Central for 1933.

"New facilities and organizations engaged in the distributions of capital and consumption of goods indicate there is a swift current toward recovery of lost ground since 1929. No more reliable index of recovery can be found than in Illinois Central territory wherein there is a pronounced representative cross-section of buying power and industrial production with accompanying sources of representative raw materials. Taking

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\$1,500,000 Addition to Axton-Fisher Plant, Louisville, Ky.



SOUTH'S HIGHWAY PROGRAM

OUT of a total of \$450,000,000 appropriated under the National Industrial Recovery Act for highway construction, more than \$150,000,000 is being expended in the 16 Southern States and the District of Columbia. Designed primarily for the relief of unemployment, highway-building, financed out of public works funds, was quite properly emphasized because of the large proportion of such expenditures represented in labor costs directly and indirectly. Coupled with the employment of labor in road construction, production is stimulated in mines, mills and factories turning out materials and machinery, so that the beneficial effects are widespread.

To facilitate construction under the N. I. R. A., the \$15,000 per mile Federal Aid limit was lifted. Federal Aid funds were made available for the first time for the building of municipal thoroughfares, which form links of State highway routes, expediting the movement of through traffic, and they were made available for paving in the District of Columbia. Also, the Act provided for financing with Federal funds repair and maintenance work to the end that employment relief would be furthered, particularly in rural areas.

The Act provides that not more than 50 per cent of the funds may be apportioned to projects on the Federal Aid system outside of corporate limits; 25 per cent for extensions of the Federal

Aid system into and through municipalities, and 25 per cent for secondary or feeder roads.

Road and Paving Work Undertaken By Districts, Counties And Municipalities

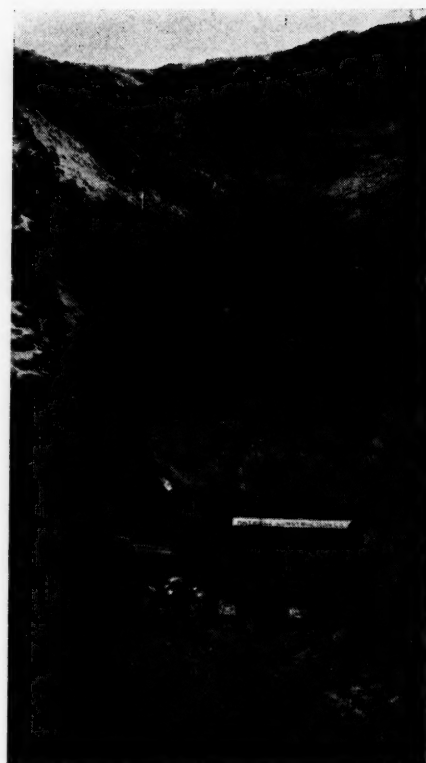
The Southern States are also going forward with maintenance and new construction financed with motor vehicle license fees, gasoline tax revenues and funds available from regular sources. The money is being expended by districts, counties and the states. Paving work is under way in towns and cities, some financed out of tax levies and bond issues, and some through the advance of public works funds.

Although road construction lagged in the early months, the accelerated pace in the closing months of the year in the letting of contracts more than made up for this delay. Judging from the high totals of awards piled up in the closing months of last year, coupled with the numerous approved projects shortly to be let to contract, there are indications that highway-building in the South will go forward during the early months of 1934 on a greatly increased scale.

November awards of \$23,973,000 for road construction held first place in 1933, October being second with \$17,762,000, and December next with \$16,451,000. In the last quarter of the year, contrary to former seasonal trends, highway contracts let called for an aggregate expenditure of more than \$57,000,000, and this total does not include the scores of projects in towns, cities and counties initiated under the Civil Works program, adopted when the Public Works plan lagged.

U. S. No. 31, Alabama

New concrete pavement between Decatur and Hartselle



U. S. Highway No. 52, West Virginia
One of the biggest highway cuts in the United States

Roads For National Parks, Forest Areas and Public Lands

Additional sums are being expended in the Southern States for roads in national parks, forest areas, Indian reservations and public lands, as the section's share of \$50,000,000 provided by the Public Works Administration. Such construction comprises the building of costly scenic drives, involving heavy grading operations, and the construction of bridges and culverts. Also, the building of roads to facilitate the movement of fire-fighting forces, the laying-out of trails and bridle paths and the opening-up generally of heretofore inaccessible areas. The states where work of this character is under way or definitely projected include: Alabama, Arkansas, Florida, Georgia, Kentucky, North Carolina, Missouri, Texas, Virginia, Oklahoma, Louisiana, South Carolina and West Virginia.

Continued Diversion Of Road-Building Funds To Be Contested

Persistent efforts towards diversion of gasoline tax revenues and motor vehicle license fees to other than road-building purposes are now being resisted by students of highway finance and administration, roads users generally, engineers and road-builders. Alive to the serious situation that has resulted because large sums in the aggregate have already been diverted from the road-building program these interests are now putting forth every effort to see that road revenues

are used exclusively for building and maintenance operations. It is pointed out, that while the diversion of funds may eliminate the need for other forms of taxation, such a step loses sight of the very small total mileage of high type highways and the growing demand for thicker, wider and stronger highways. Authorities on highway finance have sounded a note of warning against jeopardizing the investments already made in hard surface pavements through failure to properly maintain them.

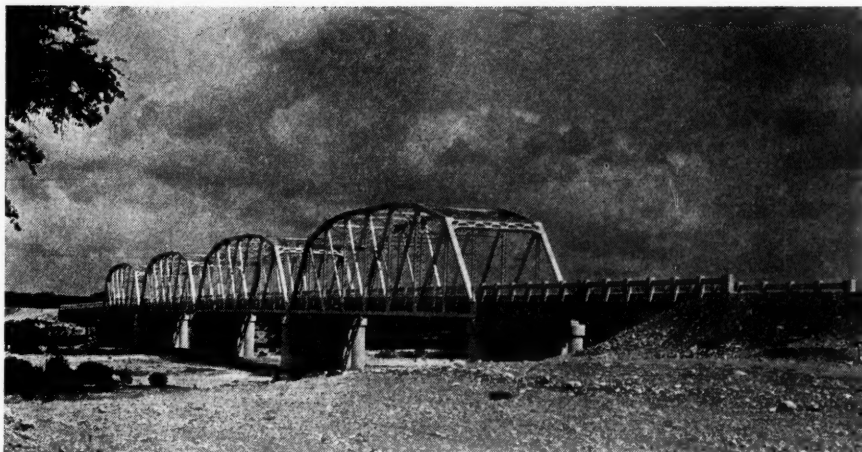
Notable Bridge Structures A Feature Of South's Road Program

In addition to the building of roads of a variety of designs and utilizing every accepted material, the South's road program calls for the building of a number of notable bridges. Some, because of their unusual character of design or methods of construction, are attracting the attention of the engineering profession generally.

The most costly bridge under way in the South is the \$15,000,000 combination rail and highway structure at New Orleans to span the Mississippi river. Difficult engineering problems are being solved in its erection. It will require 1200 tons of reinforcing steel, 39,000 tons of structural steel, 1,125,000 feet of piling, millions of feet of lumber, 240,000 cubic yards of concrete, and 537,000 square feet of mattress protection. The main bridge will be 3525 feet long, with approaches 1.5 miles long at each end.

Another Louisiana bridge that has attracted much attention is the \$1,100,000 bridge over the Atchafalaya river at Morgan City, La., notable in that one of its piers is the deepest tremie-sealed pier in the world, coming to rest as it does 175 feet below the water line. Moreover, one of its 608-foot steel spans was built on falsework high above the normal water level along the river bank and then floated into place.

Contract was let last month for another costly bridge in Louisiana—the structure to span the Bonnet Carré spillway for flood control of the Mississippi, designed to protect New Orleans



Texas Bridge Completed in 1933

from high water.

This month contract will be let for a \$1,250,000 bridge over Rock Creek in the District of Columbia, and for a costly bridge at Norfolk, Va. Outstanding bridges in various stages of planning include: \$7,500,000 bridge across Chesapeake Bay, connecting eastern and western shores of Maryland; \$1,200,000 bridge over Croatan Sound and Alligator river; \$600,000 bridge over Little Kanawha river; \$1,310,000 bridge at Jacksonville, Fla.; \$1,175,000 bridge over French Broad river at Asheville; \$700,000 structure between Harpers Island and Cape Lookout, N. C.

Summarization Of Programs In Individual States

The scope and character of road-building activities from Maryland to Texas are indicated in the summarizations herewith covering programs in representative states.

MARYLAND. A \$10,500,000 construction program, in which Federal money is being joined with State funds, has recently been put in action. The results of this, in the relief of unemployment and in the improvement of the road system,

Generals Highway Relocation

This concrete road project of the Maryland State Roads Commission eliminated 8 bad curves and poor grade of the old road. P. Reddington & Sons, contractor



are beginning to be apparent and will be felt in full force early this year.

New construction completed during 1933 totaled 116 miles, including: Concrete, 27.41 mi.; sheet asphalt, 2.99 mi.; macadam, 4.59 mi.; gravel, 8.66 mi. and plant mix bituminous surfacings, 72.44.

Construction now under way totals 23 miles; 13 miles of macadam roads have been widened and strengthened by the building of concrete shoulders.

The State Roads Commission took over by Act of the 1933 Assembly 11,000 miles of county roads for maintenance. While this has contributed largely to the reduced construction program it has relieved the counties of road expenses and has made possible reductions in the various county tax rates, varying from 17 cents to \$1.37 per \$100 assessment.

ARKANSAS. Approximately \$5,000,000 in contracts were placed under way in 1933 by the Arkansas State Highway Commission, covering various types of grading, surfacing and paving as well as heavy bridge work. In addition, \$500,000 of heavy maintenance work was placed under contract. Under the provisions of the 1932 Emergency Act \$2,000,000 was made available to the State, together with \$2,000,000 of normal Federal Aid. Under the National Recovery Act of 1933 about \$7,000,000 was made available. Of the \$5,000,000 placed under contract last year \$3,000,000 of awards represented a carry over from 1932. All Federal funds will be committed by March 31, 1934.

A total of 225 miles is under commitment or actual construction as follows: Concrete, 33.12 mi.; asphaltic retread, 109.52 mi.; gravel, 57 mi.; and graded, 25.33 mi.

ALABAMA. Alabama's State Highway Department will finance its 1934 program with Federal funds made available under the National Recovery Act, for after fixed charges such as bond interest and sinking fund are deducted from state funds the remainder will be required for operation and maintenance.

(Continued on page 44)

WHAT IS MOST LOGICAL PLAN FOR HIGHWAY EXTENSION?

By

Charles Davis, C.E.*

OUT of experience history often points the way. The history of roads may give us the most logical plan for their extension. Let us see.

Originally roads were only of local significance. Townships and towns were the only jurisdictions that built them. Their first extension was over privately owned and built toll roads, since abandoned. Then came aid from the counties followed by county roads built by them. After that aid from the States followed by State highways built by them. Then Federal aid. Why not follow through with National Highways built by Uncle Sam? Our 48 States are only larger counties as our 3078 counties were larger townships when we came to build State highways. As each larger political jurisdiction built roads a great impetus was given to the building of roads in the smaller jurisdictions. There is more reason to believe that this impetus will be even greater in our States, our counties and our townships, if the nation built the great through trunk highways we need.

County roads and State highways, built by them, did not reduce the amount of aid accorded the smaller jurisdictions. On the contrary, that aid was increased. It would be the same through national roads.

Such a system of National Capital to Capital Highways, of about 50,000 miles, together with about 600,000 miles of "farm to market roads"—meaning to railroads—in our 3078 counties would bring prosperity to our railroads (and they need it) although they fear otherwise. These highways could and should be built and used so as to assist and supplement both our main line and branch railroads.

It should be remembered that we can

* Life Member and Member Legislative Committee, American Road Builders Association; Life Member American Automobile Association; Member National County Roads Planning Commission; Founder, Trustee and President National Highways Association.

spend what we may please on our roads. For every dollar we spend we save and gain much more than a dollar. It is the only public work that gives a profit and a saving to us all, for every one of us is a stockholder.

The cost would be about \$10,000,000,000, or about \$1,000,000,000 a year if built in 10 years. Let us see what our resources are to justify our doing so.

0.28 per cent of our national wealth,
0.50 per cent of our annual trade,
0.80 per cent of our corporate capital,
1.12 per cent of our annual income,
1.33 per cent of our bank resources,
4.00 per cent of our war debts (losses) incurred during the short space of two years,

The essential picture would be the same were 1933 figures available. The total figures in the right-hand column (except the war debt figure which remains the same) would be for practical purposes reduced approximately one-half. The percentages in the first column would be doubled. Our country has not stopped, only slowed down for a time, and by the time the roads were built the above figures would be exceeded. Therefore the figures given paint a truer and more accurate picture of the plan and the results than if based on the 1933 depression figures.

Our depression and unemployment would seem a greater menace than the World War. If we could spend (lose) \$25,000,000,000 in less than two years for such destruction, we surely can spend (gain) in useful development \$1,000,000,000 a year for 10 years, all of which will add to our wealth.

What is more, we can easily get the money, for it is a manufactured article like anything else we make. Most of it is paper and credit, the latter "ink" written on the books of some financial institution. Very little is in the shape of gold. Our resources amply justify us in doing it. Banks lend more on such a showing. Our reduction of debts and withdrawal of credits by banks has been more than four times as much per annum during the past few years. Let us reverse this policy and expand not contract and thus be busy, the only way to be prosperous.

As a matter of fact we have a long distance to go to get good highways for peaceful, industrial uses. There are

thousands of miles of so-called improved roads that are in need of repair and many miles of roads that are practically impassable for months at a time. Of our hard surfaced roads, most of them are not wide enough for the increased traffic that has developed since they were built and their construction has not been of the type to support heavy industrial use.

We must have an adequate fourfold system of highways—National, State, county and town—before we can possibly hope for a road system that will serve our people properly. As these roads are paid for by the people, owned by the

\$1,000,000,000 a year is:

about \$360,000,000,000 (1928)
about 200,000,000,000 (1930)
about 125,000,000,000 (1930)
about 89,000,000,000 (1928)
about 75,000,000,000 (1930)
about 25,000,000,000 (1918)

people and free to all the people, they can be located and built primarily to best serve the people. Many years ago I advocated the fourfold system of highway development be undertaken and in February, 1916, pointed out in the MANUFACTURERS RECORD that:

Our States do not permit their counties to dictate the terms and conditions under which State highways shall be built. Our States would scout the idea of leaving to their counties the building of State highways passing through the counties. The nation cannot permit the States to dictate the terms and conditions upon which our national highways shall be built. The nation must do the work, pay for it, and afterwards maintain our great system of national highways that they may "exist to favor, foster and further the development of good roads everywhere in the length and breadth of the United States, and which will secure the benefits—social, moral, commercial, industrial and educational—in the progress of the American people which follow in the train of easy intercommunication and transit between the great centers of population and distribution and the great rural productive areas of the nation."

Our railroads are beginning a store-door delivery and pick-up service. This will grow to be universal for it is the logical move for the railroads to take if they are to give complete and quick service. National Highways, with passenger and goods motor traffic on them for lure and profit exclusively in the hands of the railroads, will be of great benefit to them and thus to the nation.

MANUFACTURERS RECORD FOR

COTTON MANUFACTURERS' PROBLEMS

By

T. M. MERCHANT

President, American Cotton
Manufacturers Association

THE cotton manufacturing industry has just passed through a very turbulent period of six or eight months. We have been tossed about from pillar to post; at times climbing the highest pinnacles only to be abruptly plunged into the gloom of a deep abyss.

Over all, however, the past several months have, in spite of their fears and disappointments, supplied a few important compensations.

Some of our stronger, better equipped mills have shown a profit within recent months; and to the average cotton mill, profits have for years been very rare accomplishments. In some instances, the mills have been enabled to pay a dividend to stockholders.

Cotton mill employees have greatly benefited as a result of recent developments. Not only have many thousands of them found needed employment, but those who are employed have received, as a rule, large proportionate increases in wage. It is estimated that the labor cost has increased in the average Southern mill from 75 to 100 per cent.

The mill worker has also had his hours of labor reduced so that he receives a high wage for working a reduced number of hours. The cotton manufacturing industry is now, for the most part, working on an 80 hour a week basis, usually including two shifts of 40 hours each. This schedule held for four and one-half months, and in December the schedule was modified to give a week's holiday to the workers for Christmas. One of the prime motives in closing a week in December was that of avoiding overproduction.

The industry has been hoping for the development of a favorable market for cotton goods as one of the compensating factors. This, however, has only been partially realized, and in spots.

There have been three active buying periods since the introduction of the cotton manufacturing code, but they have been of short duration, and two of them were inconsequential.

The industry is today suffering from a shortage of profitable orders. As was

anticipated, the development of the N.R.A. came slowly, and its full effect has not yet been felt sufficiently to allow cotton mills to sell in a stimulated market, and compensate them for the exceptionally high costs of manufacture brought about by the code.

The cotton manufacturers enjoy the distinction of being the first to submit a code to the Recovery Administration, and since its acceptance the mills have been out on a limb, so to speak, with high costs and a very sluggish market. It is hoped that 1934 will see a clearing up of this situation, and a return to the active market for cotton goods which it is natural to expect under normal circumstances.

Another compensating factor arising from the N.R.A. is the better understanding which has developed between employer and employee. While misunderstandings of the purposes and accomplishments of the code brought about a few minor labor problems, they were of lesser importance. It is believed that today the executive and employee are closer together than ever before. Through the National and State Industrial Relations Boards, they have been brought together around the table with a spirit of understanding which is encouraging.

Perhaps one of the greatest compensations is just now being realized by our industry. It is the matter of mutual understanding as among manufacturers and the present tendency of industry to regulate its own problems of production through group action within the industry. The cotton textile industry is made up of a number of groups. The statistical position and influencing circumstances of the individual groups frequently vary widely. Through group consent, however, the industry finds itself competent to meet its problems, and work them out in the light of group needs.

This phase of code development is yet in its infancy and is yet to prove itself, but so far it bids fair to become a most constructive force in the development of the future of the industry.

It was reasonable under the circumstances to foresee the difficulties which now face the industry. As stated, the cotton textile code was the first. It was in operation for weeks, therefore, before the wage increasing effect of other codes could be felt appreciably. And so the cotton manufacturers, saddled with a very high cost of production were forced to either sell at a loss, or else build up large stock of unsold goods. They did both, and now need group effort toward

a more reasonable regulation of production. Southern mills have for years been day and night runners. Many New England mills, however, had been either closed or else operating on a limited day schedule. The code had the natural tendency to speed up production in New England, while it was curbed in the South. The increased quantity of manufactured goods must be absorbed by a buying public, which until recently seemed disinclined to buy. The only other alternative is to stop manufacturing goods. That means losses, closed mills, increased costs, unemployment. The industry is now, through its code authority, working toward an avoidance of such disruptions for the future and it proposes, and hopes to reach, a practical solution through group effort.

One of the most serious problems facing the cotton manufacturers, during recent months, has been the processing tax. We now have it in full force, and some of the mills are feeling its effect severely. It is a tax almost ten times as heavy as the ordinary annual taxes. In some cases it amounts to more than the payroll.

This tax we have been unable to pass on successfully through a labyrinth of unwilling buyers. It is an added load for the mill; nor has it been of material benefit to the farmer. In fact, the farmer has been more seriously hurt by the processing tax than has the manufacturer.

The effect of the tax would not have been so serious, but for low tariff walls and the absence of compensating taxes on competing fibres. Flax, hemp, wool, jute, burlap, rayon, silk, sisal, paper and other competing fibres have been manufactured or produced domestically or imported into this country in alarming proportions since the introduction of the processing tax, and our own exported cotton is now being manufactured abroad and shipped back to us over tariff walls to beat us at our superficially raised domestic price. Our own foreign markets for cotton goods seem completely lost.

Recently a small compensating tax was placed on jute and paper products. The other competitors are still free of processing tax. The industry needs and deserves protection against such unfair competition.

This and many other problems facing the industry are yet to be worked out. There is still an air of uncertainty, and probably will be for some time; but as we become adjusted to this new order of things, those who are diligent will seek and find a way to industrial stabilization in textile and other lines.

LUMBER SITUATION IMPROVED

By

L. O. Crosby

President, Southern Pine Association
Picayune, Miss.

A CAREFUL comparison of lumber business conditions today with twelve months ago not only shows a marked improvement but recoveries far beyond the expectations of the most optimistic manufacturers and distributors. I think it is safe to say that the credit largely is due to the National Recovery Act, and the establishment of a Lumber Code.

The prices of lumber have been increased. Wage scales have been raised. The weekly running time in which labor can be worked has served to distribute the work where in many instances more laborers have been employed. While the volume of business up to the close of 1933 has shown but little increase, a much larger volume of business is expected. Export demand is good. The price in the European market today is more than 50 per cent over that of a year ago. An increased volume of buying is expected from the railroads and car shops, together with a reasonably increased demand from the rural districts to develop a volume of business that should materially increase the quotas to be manufactured.

Heretofore, there has been no way to prevent mills producing large quantities of lumber at a time that there was no market for it. They manufactured, hoping that the volume of business would soon come back, but later finding themselves unable to carry their products, they were forced to dump them for whatever they could get for them. So the period of depression being so long drawn out, this developed a condition where all mills found themselves operating at a loss and some of them at such losses as have forced them out of business.

This is the first period in the 28 years that I have been in the lumber business that I have ever known stumpage to decline. In some instances, there has been some distressed timber and plants on the market at no more than 50 per cent of the recognized value in 1928 and 29. This has imposed hardships not only on the small mills, but on the entire industry. Wages were reduced as

a means of trying to carry on and we continued to drift until the labor was working for nothing, the lumber was being sold for nothing and yet, but very few were able to buy and take any advantage of the low cost of construction.

It is true that lumber is a product that only can be sold in quantity when other commodities are being produced and sold at a profit. It is believed that most of the farm products in the South have yielded a greater profit to the producer than some of the crops in previous years. Back in 1926 when it was claimed that cotton could not be produced for 20 cents per pound, the price dropped from planting time to harvest near 40 per cent. The farmers will have a greater profit and more clear money in the 1933 crop than they had in the 1926 crop. This should increase purchasing power materially as most of the farmers have taken their credit on a basis of 5 cent cotton and they have received a price near 10 cents. The same condition is true, to some extent, in the grain district.

Arrangements are fast being perfected whereby many of the banks are able to borrow on their frozen securities, a liberal percentage of which, shortly after the first of the year, will be distributed to the depositors. This, together with the amount that can be liquidated by the farmers, will go a long way towards rehabilitating the financial structure of the South to where sound credit will be available—something we did not have during 1933.

It is anticipated that the railroads will repair and build many cars during the year 1934. It will also be necessary for many of the railroad to repair their bridges and put in more ties in '34 than they have used in any one of the past three years.

The amount of lumber that the Government has used in their various projects has been very helpful to the lumber industry.

Under the N. R. A., we have been forced to adopt conditions governing the lumber business, where the cost is weighted down with short hours and higher wages, that will prevent the mills over-producing or producing large quantities of lumber when there is no demand. Everything points to such recoveries as should bring us back to normal prices during the Spring months and at the same time to some extent restore timber values. The lumber industry was never so well organized as at the present time—not through any

Larger Volume of Business Expected in 1934

effort or choice of their own, but through the methods and principles imposed by the N. R. A. In fact, except for the N. R. A. many who are now able to operate on a small allotment and distribute a more liberal pay roll to their employes would have been operating at a loss, and many of them would have been out of business by this time.

Let's all be good soldiers and support the N. R. A. Give it a fair trial through 1934 and then if it has not accomplished the results hoped for, I am sure our great leader will try something else. It is very difficult to get people to stop to analyze under such conditions as we have passed through. Everyone feels that he is getting the worst of it, when as a matter of fact, we have all been getting the worst of it. When conditions are bad, they are bad for all, and they can never be permanently good until they are good for all, and to my mind, that most helpful will come through the restoration of confidence.

Lumber Production Increased 30 Per Cent in 1933

It is estimated that the total lumber production for the country in 1933 will be about 13,000,000,000 feet, a gain of 30 per cent over 1932, reports Wilson Compton, general manager National Lumber Manufacturers Association. Mr. Compton states that the gains scored by the industry during 1933 have been without the aid of the hoped for recovery in private building. The National Industrial Recovery Act has noticeably restored the morale of the industry, which sees in it the statutory embodiment of reforms which it had long desired but was powerless to achieve without the aid of public authority, including not only rational economic control but also the beginning of systematic conservation of commercial forests according to a plan of sustained yield as contrasted with the general full cutting of the past.

The industry—normally employing with its affiliates, about a million persons—enters 1934 in a hopeful mood and looks forward to solid, if perhaps moderate, advance during 1934. The improvement of its position will contribute to general business recovery.

THE SOUTHERN OUTLOOK

By

N. G. Symonds

Vice-President,

Westinghouse Electric
& Manufacturing Co.

EVERY indication that has come to us shows that Southern business is substantially on the up grade. The MANUFACTURERS RECORD announced in October that an all-time monthly record of more than \$178,000,000 for proposed and planned construction was set by the South in September. The November total of \$75,578,000 in contracts awarded was the highest since July, 1930, and the fourth consecutive month to register a gain over preceding months. The total awards for the last quarter of 1933, contrary to the customary seasonal trend, showed a marked increase in engineering and construction operations in the South.

Our own Southern business has decisively shown the trend to be upward. In recent months we have made major installations in the textile and paper industries of five Southern States totalling over half a million dollars. At least

New Switchboard Installation

This Westinghouse electrically operated switchboard in the Canton, N. C., plant of the Champion Fibre Company has approximate capacity of 15,000 k-v-a at 440 volts.

half of the installations have been renewals or additions to power equipment. In addition, one of the great paper plants in North Carolina replaced its switchgear with an electrically operated board carrying approximately 15,000 kv-a. at 440 volts at a cost of more than \$50,000. Another, a South Carolina plant, installed a 4,000 kilowatt turbine, condenser, and switchboard at a cost of over \$100,000. In Texas we have installed two new 30,000 kw. turbo generators for a Public Service Company and a 10,000 kw. turbo generator in an extension of the facilities of one of the Great Oil Companies. And so this story of Westinghouse installations could be carried on through paragraphs, all reflecting the growing recovery of the section.

The reversal in Southern business trends is due primarily to the re-establishment of the textile industry. Prior to the adoption of the textile code, the industry was swamped with new orders.

In order to keep up with the flow of orders, the industry has been operating under the N.R.A. with approximately the same number of employees used in 1929. Yet despite the tremendous output of material, unfilled orders on September 16 were reported by the Cotton Textile Institute still well over 425,000,000 yards.

Another factor in the expansion of Southern manufacturing is the discovery that much pine heretofore unusable can now be made into newsprint paper. As

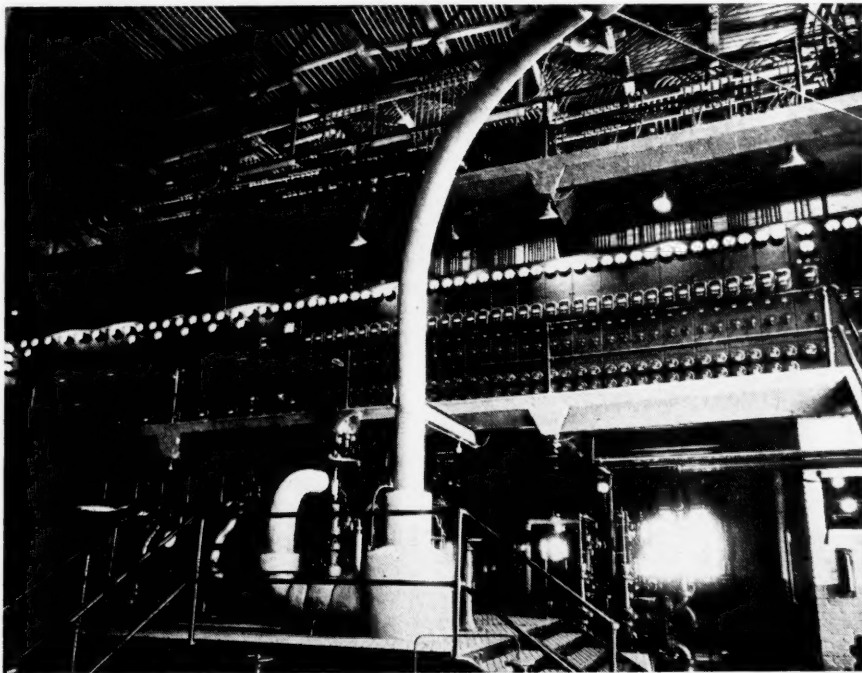
a result of this development, a number of new paper plants will likely be built soon in the South and other plants are increasing their production facilities.

It naturally follows that with the increase in production and employment, together with the higher incomes of the workers, that the transportation field and the general business field are both in better condition than they have been for some years.

It is heroic at present to make a prophecy as to the future. Yet it would appear that the South as much as any other section of the country may be expected to continue its progress back to normal. Furthermore, the recession of business in the South was not, on the whole, as great as in the industrial sections. This was due largely to the fact that the South while it was and is a *growing* industrial section, still imports a large part of its needs from other sections. In consequence of this, as demand died down, the first losses were borne by the manufacturing centers of the North and East. And it was only after the great recession had reached critical proportions elsewhere that the majority of Southern businesses were seriously affected.

With the return of some measure of confidence last Spring, there was a decided pickup in Southern business; the Cotton Textile Industry especially, coming in for what its president, George A. Sloan, describes as "an enormous demand * * * for shipment of goods in May, June and July." There has been a recession from the July high point of course but it would appear that conditions are still better than for some years past and the industry is in a better position—many mills have been completely electrified—to take advantage of the opportunity.

The South is still an agricultural country. General business prosperity depends almost entirely on the condition of the farmer. With cotton at approximately ten cents and with peanuts, tobacco and fruit all bringing a profit, the Southern farmer is in a better financial position than he has been at any time during the past several years. Certainly the majority of leading business executives of the South are convinced that the South is well on its way to normal. Our own experience of increasing Westinghouse business in the Southern States, leads us to feel that barring unforeseen developments in other sections of the country, the South will very quickly be out of the mire of depression.



Just
check
these
three
questions
...then

**AMERICAN
CABLE COMPANY, Inc.**
Wilkes-Barre, Pennsylvania

Yes ☐ Has our advertising in
MANUFACTURERS
No ☐ RECORD interested
you in Tru-Lay Pre-
formed Wire Rope?

Yes ☐ Has our advertising in some
other publication interested or
No ☐ influenced you more than it did
in Manufacturers Record?

Yes ☐ Has our advertising helped you understand
why the preformed principle adds mate-
No ☐ rially to the life of wire rope, as proven by
thousands of service records?

(Additional comments by letter would be appreciated,
including name of publication other than Manufacturers
Record, if your answer is "Yes" to second question)

Your Name

Firm Name

City **State**

WE are making an analysis of our past sales effort
on Tru-Lay Preformed Wire Rope. We would appre-
ciate your frank co-operation in this effort, for which
we will gladly reciprocate at any time.

● Less than ten years ago we announced the manufac-
ture of a new wire rope, its wires and strands preformed
to the shape and position they would occupy in the
finished rope—thus eliminating internal stress and
strain. Thousands of service records have proven that
this manufacturing process has added materially to
the life of the wire rope.

● The sales goal set at that time has already been
exceeded by a wide margin—a source of great satisfac-
tion to me. We want to do an even better job, which
must be based on intelligent sales analysis. Will you
help us by placing a check mark before the questions
in the coupon to the left? Then tear and mail. To
assist you, the opposite page carries a few of the
advertisements which have appeared on
Tru-Lay Preformed Wire Rope. Thank you! Of
course, I would appreciate it if you cared to
write me personally. Yours very truly,

AMERICAN CABLE COMPANY, Inc.

G. B. Moore
VICE-PRESIDENT

**You have seen these
advertisements in
Manufacturers Record**

FATIGUE

You know the type of man who works under tension. By 3 o'clock he is all in. Run-down, fatigued and capable of no more than a few minutes' work. This is the same man who, when he is not working, is a champion athlete.

SO IT IS WITH WIRE ROPE THAT IS NOT PREFORMED

In non-preformed wire rope, wires and strands are under tension. They are fatigued by the very nature of their construction. Wires and strands are under tension and are therefore subject to fatigue. This is the same man who, when he is not working, is a champion athlete.

Due to internal stresses, non-preformed wire rope is subject to fatigue. This is the same man who, when he is not working, is a champion athlete.

TRU-LAY Preformed Wire Rope Resists Fatigue Resulting in 30% to 300% Increased Service

The statement "30% to 300% increased service with TRU-LAY" is based on the fact that TRU-LAY wire rope is preformed, and therefore it is not subject to fatigue.

TRU-LAY PREFORMED RESISTS FATIGUE

NOTE THAT END REQUIRES NO SEIZING

This is the same man who, when he is not working, is a champion athlete.

TRY WRITING LIKE THIS...

Hold your pencil as tightly as you can, and see how quickly your hand cramps up. "T" (tension) is the cause of your cramps. Non-preformed wire rope is full of cramps when you get it. It is full of cramps as long as you use it because each wire to a rope muscle held in place under extreme tension, wires and strands being forced into their helical shapes.

THEN RELAX AND WRITE

Relaxed you can write a long time without fatigue. TRU-LAY is the same man who, when he is not working, is a champion athlete.

ROPE

the character of the rope is the character of the rope.

REFUSE TO BE BLINDFOLDED BY TRADITION

Demand TRU-LAY Preformed Wire Rope!

BEGIN NOW to cut your wire rope cost on the next job. Refuse to be blindfolded by tradition. You will not be a pre-mature. Look at the difference between the old and the new. The old is a wire rope that is full of cramps. The new is a wire rope that is preformed. The old is a wire rope that is full of cramps. The new is a wire rope that is preformed.

TRU-LAY Preformed Wire Rope

AMERICAN CABLE COMPANY, INC.

Save money... you get much longer service with **TRU-LAY PREFORMED WIRE ROPE**

PERFECT CO-ORDINATION MAKES A CHAMPION

... LIKEWISE IN TRU-LAY PREFORMED WIRE ROPE

Perfect co-ordination among strands results in wire rope service that is much better than average. Strand co-ordination is obtained only by preforming wires and strands so they carry their natural helical shapes and therefore lie normally in position, without straightening out tendency.

On the other hand in the case of non-preformed wire rope, strands and wires are held forcibly in position which means that in work, strands and wires are subjected to unnatural fatigue due to torsional and unbalanced internal stresses.

In TRU-LAY, internal stress is eliminated. Every strand carries its equal share of the load. Every wire carries its equal share of the work.

TRU-LAY resists kinking, high and low stranding and is easier to handle. TRU-LAY will not rotate in drum grooves.

That TRU-LAY gives much longer service over non-preformed wire rope of the same grade and construction.

Send for complete information. Address: **AMERICAN CABLE COMPANY, Inc.**

WHY WE MANUFACTURE AND RECOMMEND PREFORMED WIRE ROPE

For many uses Preformed Wire Rope gives increased service because the preforming process eliminates destructive internal stress which is inherent in every wire rope that is not preformed.

Because of the fact that internal stress shortens wire rope life, we recommend the use of Preformed Wire Rope in every class of service where wire rope is subjected to bending and fatiguing stresses caused by operation over sheaves and drums. What is more, we recommend Preformed Wire Rope because it has the following additional advantages:

1. Greater resistance to fatigue.
2. Less weight.
3. Easier to handle.
4. No rotation in drum grooves.
5. No kinking.
6. Cuts wire rope cost.

When they take THEIR "Make-up"

SHEDDING makes that on cutting back of the "make-up." They are never deceived when they see the TRU-LAY wire rope. They know that the TRU-LAY wire rope is preformed and therefore it is not subject to fatigue. They know that the TRU-LAY wire rope is preformed and therefore it is not subject to fatigue.

Just as two lamps of equal size will, so do non-preformed wire rope and TRU-LAY. The difference is in the way they are made. The non-preformed wire rope is made by twisting wires and strands together. The TRU-LAY wire rope is made by preforming wires and strands before they are twisted together.

That is why the difference in service life is so great. The TRU-LAY wire rope is preformed and therefore it is not subject to fatigue. The non-preformed wire rope is made by twisting wires and strands together and therefore it is subject to fatigue.

TRU-LAY Preformed Wire Rope

AMERICAN CABLE COMPANY, Inc.

\$380,511,000 FOR SOUTHERN CONSTRUCTION

WITH the \$35,586,000 of new construction contracts let in the 16 Southern States during December, the total for the year amounted to \$380,511,000. These totals, based on a compilation of reports published in the MANUFACTURERS RECORD DAILY CONSTRUCTION BULLETIN, do not include enterprises of less than \$10,000 each, some important projects for which no cost figures are available, and Civil Works Administration projects initiated during December.

The November awards of \$75,578,000 was the highest monthly total since July, 1930, being the fourth consecutive month to show a gain. Starting with awards of \$23,351,000 in July, the August total ran to \$39,351,000, September to \$33,800,000 and October to \$54,617,000. The December total, although representing a sharp decline from the preceding month's figure, is encouraging, since it represents a four-week period, as compared with a five-week period in November, and does not include the allocations for civil works projects in the South.

With industrial employment increasing, with higher prices for the products of farms, mines and factories, and with the demand for additional housing facilities mounting, the outlook is bright for a continuation of construction activity in volume in the South.

Industrial and Engineering Contracts First in Value

Considering the amount of money involved, industrial and engineering projects hold the premier position with awards totaling \$153,881,000 in 1933. Road, paving and bridge work, not including projects completed during the year nor new work and maintenance undertaken by parish, district, county and State forces, is next with a total of \$120,924,000. Public building construction, including city, county, Government and State structures in wide variety and school buildings, separately classified, let to contract last year called for an outlay of \$80,773,000.

Over \$77,000,000 for New Plants

Industrial plant awards in 1933 amounted to \$76,704,000, not including many costly projects regarding which owners refused to release cost figures. Modernization work was undertaken on a big scale following the adoption of codes, and indications are that such programs will be increased.

While small enterprises featured industrial expansion in the South last year, there was sufficient construction activity undertaken by major industrial concerns to indicate their faith in the section's future growth. Expansion in the chemical industry predominated. The Southern Alkali Works is pushing construction on a \$7,000,000 plant at Corpus Christi, Texas. The Mathieson Alkali Works started work in December on a \$7,500,000 plant at Lake Charles, La. The Dow Chemical Company and the Freeport Sulphur Company are completed plants to cost \$3,000,000 each, the first at Wilmington, N. C., the other in Plaquemine Parish, Louisiana.

Oil refineries, paper mills, textile and rayon plants, food processing factories, precooling and cold storage plants, and paint factories go to make up the impressive list of industrial awards last year.

Waterway Improvements \$35,101,000

Levee, revetment, dike construction and similar projects were comprised in the flood control program under way in the South, which last year resulted in awards totaling \$35,101,000. The promotion of this big-scale activity for flood control has created employment for engineers, skilled mechanics and laborers directly on the jobs, and stimulated employment in plants turning out numerous kinds of materials and contractor's machinery of every accepted type and description.

Dredging in rivers, harbors and inland waterways last year called for awards of \$26,873,000. Thus, are being developed facilities for moving economically the output of the South's farms, mines, forests and factories for consumption at home and abroad.

Building Awards \$94,000,000

Norris Dam—keystone of the vast industrial empire contemplated in the plans of the Tennessee Valley Authority—is under way in upper Tennessee. Above Muscle Shoals work is to start soon on the Wheeler Dam, construction already being well advanced on the navigation locks. Surveys are being completed for the \$5,000,000 electric transmission tie-line to join Muscle Shoals and Norris Dam. Engineers are pushing plans for a \$4,000,000 fertilizer plant at Muscle Shoals.

At Marmet, W. Va., a \$2,000,000 navigation lock is under way. At Harvey, La., a \$1,500,000 lock has just been com-

pleted. In the Florida Everglades \$9,000,000 is being expended for works to control Lake Okeechobee.

Awards for city, county, Government and State building projects in 1933 totaled \$72,305,000, while school building awards ran to \$8,468,000.

Residential construction amounted to more than \$13,000,000 in 1933. Apartment house and hotel construction gained last year. Bank and office building construction showed up well. New store buildings and improvements to business establishments for which contracts were let in 1933 amounted to \$4,258,000, indicating a general improvement in business conditions and a gradual restoration of buying power.

CONSTRUCTION ACTIVITY FOR DECEMBER, 1933

	Contracts Awarded	Contracts to be Awarded
General Building		
Apartments and Hotels	\$155,000	\$40,000
Association and Fraternal	12,000	220,000
Bank and Office	174,000	50,000
Churches	200,000	276,000
Dwellings	963,000	485,000
Stores	387,000	162,000
	\$1,891,000	\$1,233,000
Public Buildings		
City, County, Government and State	\$6,002,000	\$16,438,000
Schools	746,000	21,037,000
	\$6,748,000	\$37,475,000
Roads, Streets and Paving	\$16,451,000	\$25,240,000
Industrial and Engineering Projects		
Dredging	\$1,392,000	\$16,380,000
Filling Stations, Garages, etc.	65,000	200,000
Industrial Plants	6,674,000	30,543,000
Levees, Revetments, Dikes, etc.	623,000	745,000
Sewers, Drainage and Waterworks	1,742,000	18,967,000
	\$10,496,000	\$66,835,000
Total	\$35,586,000	\$130,783,000

CONSTRUCTION ACTIVITY FOR TWELVE MONTHS, 1933

	Contracts Awarded	Contracts to be Awarded
General Building		
Apartments and Hotels	\$2,822,000	\$6,283,000
Association and Fraternal	279,000	2,063,000
Bank and Office	1,941,000	3,174,000
Churches	2,403,000	3,454,000
Dwellings	13,220,000	13,210,000
Stores	4,268,000	3,481,000
	\$24,933,000	\$31,695,000
Public Buildings		
City, County, Government and State	\$72,305,000	\$179,123,000
Schools	8,468,000	64,664,000
	\$80,773,000	\$244,087,000
Roads, Streets and Paving	\$120,924,000	\$149,381,000
Industrial and Engineering Projects		
Dredging	\$26,873,000	\$61,174,000
Filling Stations, Garages, etc.	3,154,000	6,809,000
Industrial Plants	76,704,000	228,116,000
Levees, Revetments, Dikes, etc.	35,101,000	58,366,000
Warehouses	1,097,000	513,000
Sewers, Drainage and Waterworks	9,928,000	123,764,000
Miscellaneous Projects	1,024,000	2,440,000
	\$153,881,000	\$481,182,000
Total	\$380,511,000	\$906,345,000

AROUND THE COUNTRY EVERY FRIDAY . . . BY TELEPHONE



ONCE a week by telephone, the sales executives of Kelvinator Corporation make a complete swing around the country, stopping in many cities to discuss current activities with their district managers.

This regular use of Long Distance not only keeps them in close, up-to-the-minute touch with developments in every territory . . . but it provides a valuable sales stimulus, by letting headquarters officials help the field men with their local problems.

Every-day use brings profitable results

In addition to these weekly talks, Kelvinator Corporation makes extensive *every-day* use of Long Distance in furthering its many promotional efforts. R. I. Petrie, Sales Manager, cites a recent experience as typical of what can be accomplished by this swift, sales-building service.

"A small price rise had been announced for the end of the month," he says, "and buying had been exceptionally heavy in anticipation of it. The day

before the rise was to take effect, we telephoned forty-four of the company's largest distributors and dealers. In a few hours by Long Distance orders were received for 9000 additional units — one-fifth of the entire month's orders. The result was an all-time sales record for the month . . . 45,500 units."

Companies of every size are constantly telling us how they are getting new business, making advantageous purchases, cutting costs in unexpected ways . . . through their *organized* use of Long Distance. Wouldn't it be worth while to see what *your* company might accomplish? We will be glad to help. Just call the local Bell Telephone Business Office, and a telephone representative will visit you at your convenience. No obligation.

TYPICAL STATION-TO-STATION RATES

From	To	Daytime	7 P.M. 8:30 P.M.	
Detroit	Cleveland	\$.60	\$.50	\$.35
New York	Washington	1.05	.90	.60
Omaha	Denver	2.05	1.75	1.15
Atlanta	Los Angeles	7.00	5.50	4.00



IRON, STEEL AND METAL MARKET

ALTHOUGH iron and steel production showed a slight decline during the last week of December, largely on account of plants shutting down for the holidays, the prospects for the next quarter are viewed encouragingly. This is due to the expectation of increased railroad buying, the upturn in automobile production, and the demands present and prospective of the public works program.

At the close of the year, counting the ups and downs as well as the prospects in an industry that has always marked for trade generally the beginning of an upturn or a decline, perhaps the most significant change that has occurred has been its adaptation to the conditions of operation under the N.R.A. code and the request to renew these conditions for further trial with the admission that so far they had worked to advantage. Whatever may have been the difficulties, part of the results have been an increase in employment and payrolls to figures that are approaching those of 1929.

The new year opens with better prospects than were found in the outlook of twelve months ago. While production reached a point during the summer of 52 per cent and subsequently declined to 25.2 per cent, the summer rise was due to extraordinary conditions which produced buying in expectation of the adoption of codes and consequently price increases. It was recognized at the time as probably a spurt. The present situation appears to be on a more permanent basis with plants improved and economies put into effect with the result that the industry is set to take advantage of increasing orders as they develop.

While among Congressmen there is some expression of the thought that in the effort to abolish chiseling and price-cutting, we have gone too far in setting aside the Sherman Law, it is true not only in iron and steel, but in many of the fundamental industries of the country, the greatest encouragement comes from the fact that products now can be made at a reasonable profit and the price cutter is to be not only unpopular, but a law-breaker under N.R.A. operation. For three years of this depression he has been the bete noire of every well conducted industry, which in the effort to maintain the character of its product and to pay its workmen a living wage was harassed persistently by cut-throat

competition that almost destroyed the incentive to progress.

Ernest T. Weir, Chairman of the National Steel Corporation, in his summary of conditions, says:

"1933 in retrospect appears at this time to have exceeded the most sanguine expectations of steel leaders. The estimates which were made at the beginning of the year were conservative and hopeful, but naturally could not take into account the extent to which artificial stimulus would be employed to improve general business. * * * The vastly increased ore shipment and production tonnage estimates indicate that the iron and steel industry has definitely scraped bottom and is experiencing a pull to higher production levels.

"Lake Superior ore shipments are approximated at 22,000,000 tons for the year, as against 3,500,000 in 1932, which was the worst year on record. Steel production tonnage for 1933 is estimated to have increased over 1932 by 70 per cent."

Mr. Weir says that higher prices are a foregone conclusion "as a result of the greatly increased costs of production under code compliance. The payroll increase for the entire steel industry is over \$100,000,000 annually."

Stating a few of a number of new items will show the trend. During the latter part of December, the Inland Steel Company put six open-hearth furnaces in operation at its Hammond, Indiana, plant. Expectation was expressed that the plant's highest operating level for several years would be reached. It was due to increased buying of general steel products, including plate, shapes, hardware and government orders.

The American Rolling Mill Co. blew in a blast furnace at its Columbus plant, idle since July 1930. This company also reports increasing interest in uses of its steel sheets and porcelain enameled iron for general architectural uses.

Orders for a variety of products are taking shape more rapidly than for a long time, and are contributing in a heartening way to the better feeling. Among these the Bethlehem Steel Corporation has an order for 2700 tons for street railway rails for the City of Detroit, while their subsidiary, the McClintic-Marshall Company has 4,000 tons for shapes ordered for San Francisco Federal Building, as well as 1,000 tons of plates for Los Angeles and 450 tons of shapes for a warehouse at Toledo. The Kalman Steel Corporation, another Bethlehem company, has an order for 1400 tons of piling for bridges for the

Cape Cod Canal. The Virginia Bridge & Iron Company, Roanoke, has an order for 5,000 tons of structural steel for the new plant to be erected by the Mathieson Alkali Company at Lake Charles, La. This steel will be fabricated at the Birmingham and Memphis plants of the Virginia Bridge & Iron Co. This company also has the contract to erect about 600 tons of steel for an addition to the Martha Mills, Thomaston, Ga., of the B. F. Goodrich Tire & Rubber Co.; 500 tons for an addition to the United States Potash plant at Carsbad, New Mexico, and contract to build approximately 750 tons of cableway towers for the Tennessee Valley Authority.

The Pennsylvania Railroad orders for 140,000 tons of rails and other products have been started, 13,000 tons of tie plates went to the Republic Steel Corporation and 12,000 tons to the Weirton Steel Co., besides 25,000 tons of miscellaneous to other companies. During the month \$5,500,000 was allotted by the P. W. A. for loans to the Boston & Maine Railroad for reconditioning locomotives, buildings and cars, both freight and passenger, and to purchase new equipment. The receiver of the Central of Georgia was allotted \$500,000 to purchase 200 new coal cars. The New England Terminal Company placed an order with the Chicago Bridge and Iron Works for five oil tanks of 54,000 barrel capacity, requiring 1100 tons of plates. The Mississippi Valley Structural Steel Co. closed an order for 1200 tons of structural steel for a lock at Quincy, Ill.

The B. & O. Railroad has been allotted \$4,230,000 by the Public Works Administration for 35,000 tons of rails, 820 coal cars, 5,000 freight cars and 240 locomotives. Besides the B. & O. the Southern Pacific was allotted \$12,000,000; the Illinois Central \$9,300,000 and three other roads a total of over \$2,000,000.

Inquiry for structural steel is reported as being brighter than for some time and reinforcing steel is experiencing a better outlook. Recent contracts included an order for 900 tons received by the Concrete Steel Company for the Navy Yard at Philadelphia.

Cast Iron Pipe Awards

These have been more numerous of late. Among orders placed, there is one for 800 tons to R. D. Wood & Company for 6 to 12 inch pipe for Croton, New

(Continued on page 54)

TENNESSEE HOOP



DELIVERS THE GOODS *and Delivers Them Safely*

MODERN transportation facilities have placed a great responsibility on the steel hoop. The stress and strain which tight cooperage, slack barrels, tubs, hogsheads and casks undergo in transit demand a hoop of exceptional qualities—a hoop accurately and cleanly rolled from the highest grade of cooperage steel.

Tennessee Hoop has earned a well-deserved reputation for uniform quality, workability, durability, and pleasing appearance. Its correct gauge,



tight scale and even temper make it the ideal hoop for your needs. Whether your requirements consist of hoops in coils or cut to length, beaded, punched, riveted or flared, Tennessee Hoop will deliver your goods—and deliver them safely!

Tennessee mills are ideally located for service to Southern manufacturers. District offices are maintained in principal cities for your convenience. Inquiries or orders, placed directly with us, or through our representatives, receive immediate attention.

≡ TENNESSEE COAL, IRON & R. R. CO. ≡

Subsidiary of United States Steel Corp.
General Offices: Brown-Marx Bldg., Birmingham, Ala.
District Offices in Principal Cities

EQUIPMENT

NEW AND IMPROVED

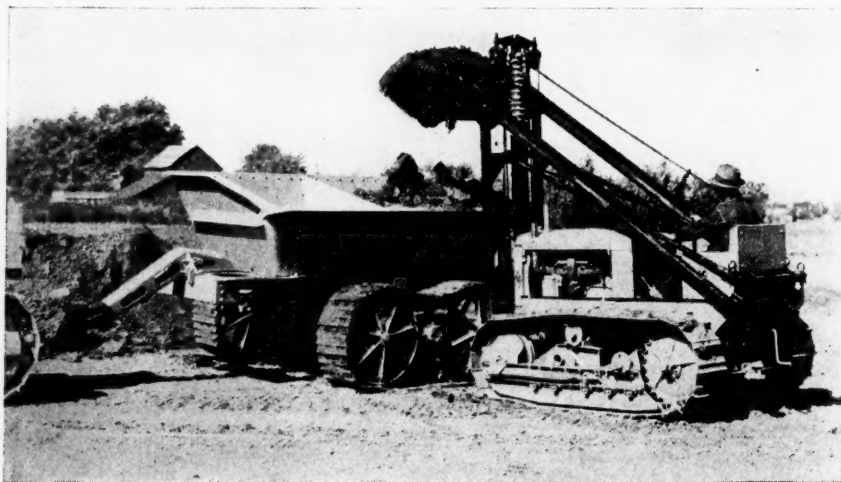
Improved Flexible Coupling

The Morse Chain Company, Ithica and Detroit, Division of Borg-Warner Corporation, announce a new and improved flexible coupling—the Morflex—a companion to the Morse Standard Coupling. Specially developed rubber is used as the flexing medium, simple in design and based upon "best recent practice." The flexing member is a complete unit comprising four moulded non-cold-flow rubber trunnion blocks of special design spaced 90 degrees apart.

Versatile Front End Shovel Loader

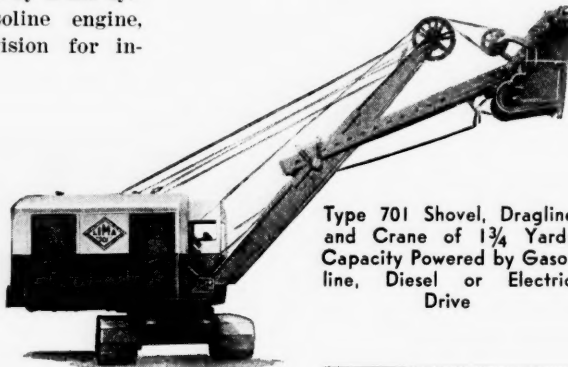
In collaboration with the Allis-Chalmers Manufacturing Company, the Frank G. Hough Company, of Chicago, has developed a new front end shovel loader for the A-C Model "M" tractor. New features in this handy tool are said to be quite different from those found on other similar equipment. The A-C Model "M" tractor is equipped with a special wide gauge long track, and track frames are rigidly mounted to eliminate all oscillation, thus making it possible to mount the loader more solidly than before. All thrusts are taken on heavy channels supported on the long truck frame, and there are five rollers per track which materially spread the weight of the loader. The standard $\frac{1}{3}$ yard bucket may be removed and a bulldozer blade installed, or a larger bucket may be used for handling snow or other light material. The unit is hydraulically controlled and is completely equipped with counterweights and rear starting crank, while the drawbar is clear for use on any pulling work.

A-C Model "M" Tractor Equipped With Front End Shovel Loader



Ohio Power Shovel, Dragline and Crane

Powered by a six cylinder gasoline engine, with provision for in-



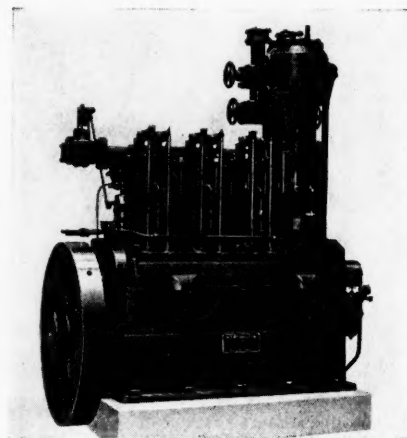
Type 701 Shovel, Dragline and Crane of $1\frac{3}{4}$ Yards Capacity Powered by Gasoline, Diesel or Electric Drive

stalling Diesel or electric power units when desired, a new $1\frac{3}{4}$ yard shovel, dragline and crane is announced by the Ohio Power Shovel Company, Lima, Ohio. This machine is designated as Type 701, in which special attention has been given to the selection of materials, the shafts and other parts being made of steel specially formulated for their particular use. Quiet long-lived helical cut spur gears are used and friction is practically eliminated by the use of roller bearings. Square lever shafts eliminate troublesome keys; shafts, on which are mounted sliding members, are splined for accuracy in fit and elimination of backlash, and cable life is lengthened by the use of drums of exceptionally large diameters, each drum being of sufficient diameter to accommodate extra long cables without double wrapping. Synchro power clutches insure ease of operating, while the boom and dipper handle are of the box type to insure strength and durability. The manganese dipper is cast in one piece with detachable lip,

and the crawler truck is of the open roller type with provisions for applying extensions in the field.

Engine Driven Refrigeration Compressors

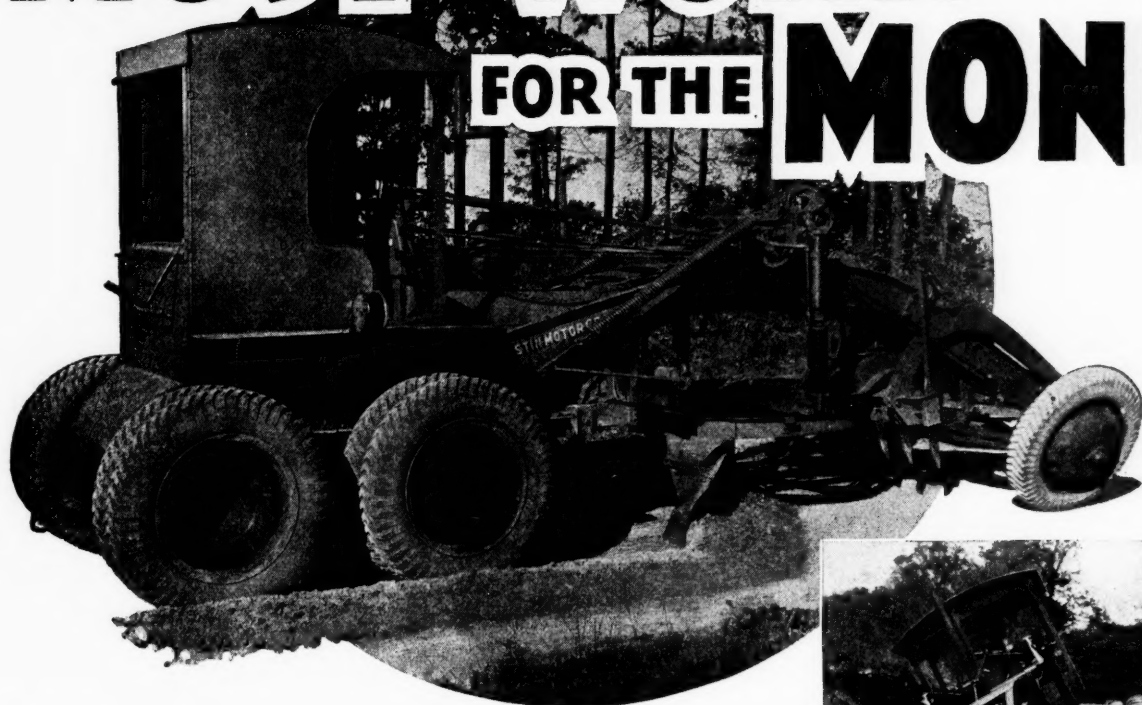
Worthington Pump and Machinery Corporation, Harrison, N. J., has introduced a line of engine-driven refrigeration compressors designated as "Uni-



"Unibloc" Compressor

bloc" Diesel and Gas Engine Compressors. In these units, a compressor cylinder is mounted directly on the base of a standard Worthington vertical four-cycle Diesel or gas engine. High efficiencies are claimed because of the elimination of mechanical friction, the placing of the suction valve in the top of the piston, and the adaptability of the well known Worthington Feather Valve to higher speed of operation. Lubrication of the compressor piston and stuffing box is effected by a mechanical force-feed lubricator. "Unibloc" compressors are available in a complete range of sizes for handling all types of refrigeration.

MOST WORK FOR THE MONEY



TOWNS, counties and contractors buy the "Austin 77" — because they can easily justify the expense for one machine when it does the work of five. Few can afford a motor grader for highway maintenance, a snow plow, and other machines for light ditching, scarifying and oil mix. But, in one purchase the "Austin 77" covers all these requirements. Every road contractor and highway or municipal official can afford to make it the next machine on his equipment list—for its all 'round usefulness. Let us explain in detail its "10 Points of Superiority". Send the coupon below today.



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OIL MIX



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REMOVAL**



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ROAD ROLLERS, CRUSHING & SCREENING PLANTS, SCARIFIERS,
SWEEPERS & SPRINKLERS, ROAD GRADERS, ELEVATING GRADERS



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Please send information on the ☐ Austin No. 77 Motor Grader.

Name _____ State _____
Address _____
City _____

LOCAL DISTRIBUTORS
WAGONS, SNOW PLOWS.

Looking Ahead

Business conditions are gradually improving. In some lines they are pronouncedly better. Unfilled demand is growing and the needs of industry must be met. Modernization of plants is one of the requirements of present day cost conditions.

Adequate banking connections are also essential.

Baltimore Commercial Bank

GWYNN CROWTHER, President

Baltimore, Maryland

Member Federal Reserve System

Electric Bond and Share Company

Two Rector Street
New York

FINANCIAL NEWS

Preferred Stock or Capital Notes

Figures as to the total amount of stock or capital notes sold to the Reconstruction Finance Corporation by National and State banks show that up to the first of the year \$823,000,000 is the aggregate amount disposed of by 4,524 banks. A number of the larger banks in New York, Chicago and other financial centers have responded to the appeal of the Government to take the lead in this movement for credit expansion. While business men in various sections complain that credit facilities are still lacking, perhaps the most definite retardation to industrial expansion is uncertainty about the permanent dollar value of the investment that may be contemplated.

The Commodity Dollar

In an address on the commodity dollar, which he regards as "a practical impossibility," Dr. Benjamin M. Anderson, Jr., says "the laws of money are not simple mechanical laws, subject to precise mathematical formulation. The laws of money are statements of the way in which human beings react when they are dealing with money. * * * Men largely concern themselves about the values of goods and take the value of money for granted. When, however, the value of the money itself comes into question and men are uncertain as to what money will be worth a week hence, a year hence or longer, a new complication arises and a new set of reactions manifest themselves."

Frank A. Vanderlip, former President of the National City Bank, suggests the use of gold only for bank reserves and as a means of settling international trade balances. He believes that modern conditions, with the flight of capital abroad, is one feature making the old fashioned gold standard unworkable.

Deposit Insurance

Most of the banks of the country that are open have qualified for membership in the Deposit Insurance Corporation, which carries with it a guarantee of all deposits in such banks in amounts up to \$2500. It is anticipated that large sums of hidden money will be placed on deposit as a result.

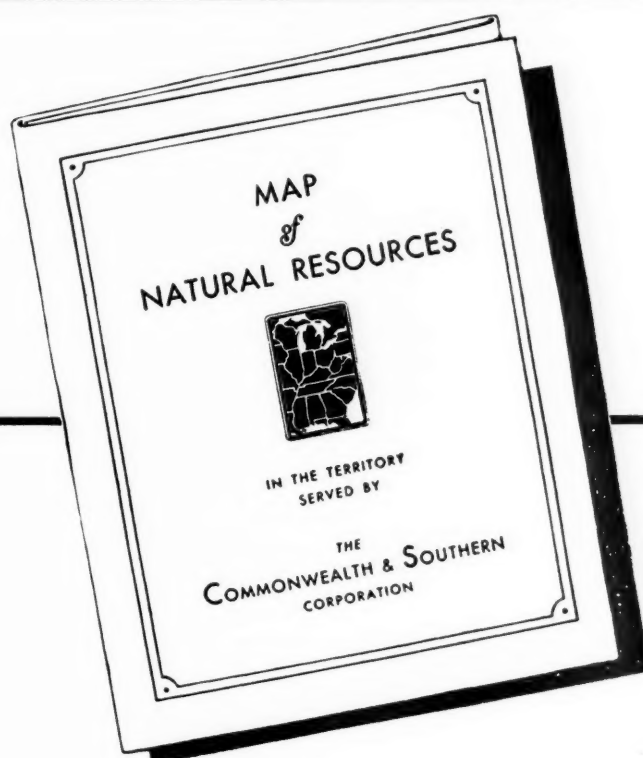
Not only the banks, but the commercial world are keenly watching the experiment. Its success or failure will have a definite effect upon the reception to be given the provisions of the bill covering insurance of larger amounts to go into effect July 1st.

Stability of Currency

Uncertainty over the Government's gold policy continues. This leads to anxiety because of the well-known proclivity of certain members of Congress to press for outright inflation and an increase in the circulating medium without full regard to what is back of it.

In the meanwhile, private capital to a large extent remains in retirement. Owners are uneasy about the future value of investments. This may be changed by a surpluseage of funds in the hands of banks as deposits increase with the adoption of deposit insurance. With this growth banks must seek investment and it is anticipated that credit will become freer. When that starts private venture will be encouraged. The

(Continued on page 32)



*M*ANUFACTURERS considering the establishment of a more favorable plant location or branch plant development will be interested in market studies and other information compiled by the Industrial Development Department of The Commonwealth & Southern Corporation.

Subsidiaries of this Corporation serve a territory of widely diversified natural resources. The important commercial position of the numerous cities and towns served is due principally to certain economic advantages which are essential to successful manufacture, namely, abundant and accessible sources of raw materials, satisfactory labor conditions, dependable supplies

of power at low cost and direct transportation facilities to large consuming markets and distributing centers. This territory also contains some of the richest and most fertile farming regions in the United States as well as substantial deposits of coal and other minerals. Conditions of this character make for progressive community development along sound permanent lines.

In order to give some idea of the economic advantages and possibilities of this territory, a map showing the principal natural resources and other interesting information about the territory served will be mailed upon request.

ADDRESS

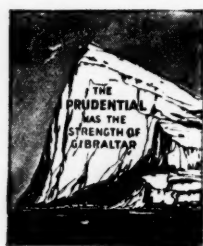
INDUSTRIAL DEVELOPMENT DEPARTMENT

THE COMMONWEALTH & SOUTHERN CORPORATION
20 PINE STREET, NEW YORK

For Your Employees in the New Year

GROUP LIFE INSURANCE

An appropriate time
to inaugurate this
always helpful plan.



THE PRUDENTIAL
INSURANCE COMPANY OF AMERICA

EDWARD D. DUFFIELD, President
HOME OFFICE, NEWARK, N. J.

Stability of Currency (Continued from page 30)

ventures of some will lead to venture on the part of others and the improvement, which means a return of confidence, should grow. That is the hope.

Aid for Home Owners

The Houston Post says there are \$21,000,000,000 of city home mortgages in the United States, and of this amount \$5,000,000,000 are in default. The Home Owners Loan Corporation is authorized to issue bonds to the total of \$2,000,000,000, so only partial relief can be provided by that source.

The purpose of the Corporation as outlined was to serve the small home owner in distress, and it is evident to those concerned in property values and the way out of the dilemma that a large part of the obligation can only be met through increasing prosperity and a rising real estate market. One of the distressing things about the depression has been the almost total absence of recognized value in real estate.

Taxes on Tax-Exempt Bonds

A plan is said to be formulating to have introduced at this session of Congress a bill to impose taxes on tax-exempt bonds. How this can be done without breaking faith is another matter. Doubtless it would require a Constitutional amendment, but even that is not impossible.

Railroad Maturities

Moody's estimates that the railroads of the country face the problem of financing \$217,247,000 bond maturities during this year. Nineteen thirty-three was a difficult year in re-financing, and this year, because of the unfavorable investment market and the difficult credit situation, it is quite likely that the carriers must depend upon Government aid and a cooperative attitude on the part of bondholders to meet the situation.

Chairman Jones of the Reconstruction Finance Corporation has announced that the Government expects to help in financing the railroads to the extent of not less than \$2,300,000,000. This probably includes the purchase of rails, equipment and supplies, as well as helping in the huge re-financing program.

Inflation

Those who own insurance policies, bank deposits or any other class of credit upon which they receive a fixed income, suffer through inflation. One of the distressing things about Germany's course during the flight of the mark in 1923 was the hardship imposed upon those with fixed incomes, in many instances their only means of support, which were reduced in purchasing power to a pittance almost over night.

The quantitative theory of money carries with it a resulting rise in prices that may offset, but the man or woman receiving a fixed number of dollars has his purchasing power reduced in proportion to the price rise.

Railroad Returns

Preliminary reports at the end of 1933 show that class I railroads had a net operating income of \$465,000,000, which is equivalent to a return of 1.77 per cent on their property investment. This is comparable with \$326,298,000 in 1932, or a return of 1.25 per cent on property investment. The gross operating revenue for 1933 amounted to approximately \$3,090,000,000, which was a decrease of 1.2 per cent under 1932, but operating expenses decreased 6.4 per cent under the previous year.

Freight handled showed an increase of nearly 8 per cent.

MANUFACTURERS RECORD FOR

Spirit of '33

Among Associated Employees

THE 15,000 Associated employees include linemen, meter readers, stenographers, service men, accountants. During the depression they have taken pay cuts. In these respects they are not much different from other utilities employees. But in responsiveness and willingness to cooperate in defeating the difficulties of the depression they are unusual. Two of their achievements are outstanding:

New Business Secured. Voluntarily, all employees worked together to find new electric and gas business. During the past 12 months these efforts have resulted in the sale of \$2,808,000 of appliances, which will use \$813,000

of gas and electricity annually.

Securities Distributed. During the spring of 1932, at a time when financial markets of the country were crippled, the Associated System was confronted with heavy refinancing. Associated employees went out and sold \$6,200,000 of debenture bonds. This achievement was of vital importance in protecting the investments of the quarter million Associated security holders. A Federal Trade Commission Examiner recently praised this spirit of cooperation among Associated employees. It is this spirit among workers which will help the nation win its war against depression.



Associated Gas & Electric System

61 Broadway, New York



THE GEORGIA MARBLE COMPANY
Producers and Manufacturers of
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TATE, GEORGIA
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**\$1,000,000 IMMEDIATELY AVAILABLE
FOR ADVANCING INSURANCE PREMIUMS**

We can have your insurance premiums, all kinds (excluding life) countrywide, prepaid to Insurance Companies at little cost; no collateral, no notes, no endorsers. Initial payment 15 to 41%—balance monthly, quarterly, semi-annually or annually. Insurance engineering service without additional charge. No insurance account too large—none too small.

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Manufacturing

BANK AND COMMERCIAL STATIONERS

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BALTIMORE, MD.

CHARACTER QUALITY
—SERVICE—

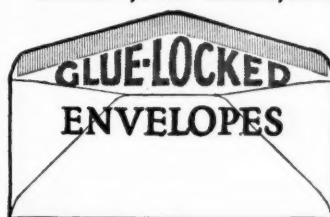
While cosmopolitan in its general appeal, and modern up to this moment in its equipment, there is a peculiar flavor of The Old South here which Southerners are quick to note and appreciate. They feel at home and come back to us again and again.

Rates \$3.00 per day and up. Every room with bath or shower. Centrally located.

The Southern Hotel
BALTIMORE

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Direct from Manufacturer to Consumer



**PLAIN and
PRINTED**
All Sizes
and Styles

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Sales Offices, Washington, D. C., Philadelphia, Pa., Newark, N. J.

GULFSTEEL

**THE SOUTH'S LARGEST
INDEPENDENT MANUFACTURER
OF FINISHED STEEL PRODUCTS**

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INGOTS
BILLETS SLABS
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BARS CHANNELS ANGLES
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STEEL SHEETS
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BARB WIRE
WIRE FENCE FENCE POSTS
STAPLES BALE TIES
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RODS
WIRE NAILS SPIKES
WELDING WIRE
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Complete operations at one big plant assure uniform quality and prompt, personal attention to every order. Send us your inquiries.



GULF STATES STEEL COMPANY

BIRMINGHAM, ALABAMA



OVER THE EDITOR'S DESK

REDUCTION OF OUTPUT does not appear to be regarded in all countries as the way out of the depression. Some are planning to increase production while in the United States the effort is to restrict it. While we limit the manufacture of textiles, Germany is buying more textile machinery. While we are curtailing cotton acreage, foreign growers are increasing their acreage. Germany is to increase its tobacco acreage by 10 per cent and we are restricting our tobacco crop.

THOMAS A. BUCKNER, President of the New York Life Insurance Company, announces—"our assets are larger at the end of 1933 than on any previous year-end in the company's history. As a matter of fact, income has exceeded disbursements during every year of the depression."

The strength, stability and helpfulness of our great insurance companies have been abundantly demonstrated during the days of business decline and mounting debt. The test has been a severe one, but has been fully met.

Mr. Buckner is correct in looking forward to the new year with confidence. He says, concerning 1934, "the encouraging record of legal reserve life insurance quite naturally leads one to expect a substantial increase in life insurance sales once recovery really gets under way."

Assets of American Life Insurance Companies increased \$381,000,000 during the past year and the estimated total insurance amounts to more than \$21,000,000,000.

THE UNITED STATES BUILDING AND LOAN LEAGUE SAYS that more than \$25,000,000 has been expended this year on residence repairs on 30,000 homes. It will be, probably, a long time before prices of building materials are as low as they have been in 1933. As prices go up the demand will increase. People buy more on a rising market.

AT A RECENT CONFERENCE at Philadelphia of those opposed to the ratification of the St. Lawrence treaty, it was agreed to present demands to the present Congress for the defeat of the treaty, which was described as being "damaging to American commerce and adding unnecessarily to the burden of taxpayers." Two hundred commercial organizations East of the Mississippi River presented their opposition. Mayor Moore of Philadelphia, in voicing the adverse sentiment, pointed out that of the initial \$300,000,000 expenditure, the United States would have to supply the major part of it, and when completed the entire project will probably cost the people of this country nearly \$1,500,000,000.

ACCORDING TO INFORMATION made public by the Department of Commerce, Great Britain is developing a low-priced airplane engine, which, with a suitable fuselage, will probably make the complete airplane available at less than \$600.

THE ENGINEERING FOUNDATION, which is the research agency of the National Engineering Society, is conducting a widespread program of research with a view to the further development of new alloy steels and alloys of light metals. This is prompted by the expected widespread advance in highway, air and water transportation, and what is described as "impressive possibilities" are believed to be opening up. In fact, it is predicted that the future of the automotive industries, at present the largest users of high grade alloy steels, will be largely influenced by the acceleration of scientific progress in this field.

The use of such steels in the new spring suspensions of

MANUFACTURERS RECORD FOR

1934 cars is cited as an illustration of the importance of such research to the automobile manufacturer and owner. The objective, of course, is higher performance, without increasing weight, or the same performance with less weight. Further applications of stainless steels offer an outlook in other lines.

The greatest application of alloy steels has been because of their high degree of strength and resistance to corrosion.

Aside from mechanical improvements made possible, special materials have aided in adding to better appearance, as will be found in exterior fittings of cars which do not rust and require very little, if any, attention.

ARTHUR D. LITTLE, INC., make their Industrial Bulletin unusually interesting. In the issue for December "producer gas" is mentioned as coming into increasing use abroad in the modern operation of motor trucks. The Bulletin says "instead of gasoline, the operating fuel (producer gas) is made by drawing a restricted supply of air through heated coke, coal or wood contained in a compact unit built into the chassis. The limited combustion of this fuel yields producer gas, a carbon monoxide-nitrogen mixture. This gas is consumed directly in the usual combustion engine conventionally designed except that a higher compression ratio is preferred. The high cost of petrol and other motor fuels prompted the use of substitutes in most European countries. Germany, using producer gas, estimates that the cost is one-tenth of the cost of gasoline.

AN INTERESTING NEWS ITEM from the government speaks of the efforts being made by the Bureau of Standards to find a domestic sand which will be found satisfactory in replacing the imported sand which is used in foundries producing fine metal and bronze ornamental work. Tests to this end are being conducted by the Bureau. The imported sand is said to have a peculiar combination of grain and bond, which makes it highly refractory. Of the domestic samples so far submitted, one has been found with very promising properties which approximate those of the imported sand. Actual shop tests are to be conducted at the Washington Navy Yard.

THE LUMBER CODE AUTHORITY, in compliance with the Lumber Code, is undertaking to bring about the marking of all lumber and timber produced to indicate the quality grade, the designation of the manufacturers, dimensions and kind, as well as condition of dryness. A proposed plan for accomplishing the results has been submitted for criticism to administrative agencies.


FRESH ACTIVITY is seen in the gold fields of the South that were abandoned years ago. The Carolinas, Georgia and Virginia report marked interest in the search for the precious metal. North Carolina, 100 years ago, was one of the leading gold producing states. Thirty-six of its 100 counties have yielded gold to more or less extent. It is only of late, due to the increased price of the raw metal, that it paid sufficient to justify its recovery. It requires expensive operation to extract it from its bed.

COTTON ADJUSTMENT CONTRACTS intended to restrict the 1934 cotton planting to 25,000,000 acres are being sent out by the Government. It is estimated that \$125,000,000 will be paid to cotton producers of the South under the 1934-35 cotton adjustment program. More than 10,000,000 acres were taken out of production last year but due to a favorable growing season the crop was large and there is still a surplus of cotton. A further curtailment to 25,000,000 acres it is hoped will more nearly balance cotton supply and demand this year.

JANUARY NINETEEN THIRTY-FOUR

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BALTIMORE — MARYLAND

INDUSTRIAL NEWS

Ryerson Acquires Bacon and Company

Joseph T. Ryerson & Son, Inc., of Boston, New York and Chicago, have purchased Bacon and Company, iron and steel producers of Boston, organized in 1868. The Ryerson company was organized in 1842 and has plants in ten important industrial areas of the country.

Erie City Iron Works Manager

The Erie City Iron Works, Erie, Pa., announce the appointment of Frank G. Brinig as general manager. Mr. Brinig has been connected with the company for upward of 30 years. He served as assistant sales manager for eight years until his appointment as works manager six months ago.

Plan For Financing Insurance Premiums

The Hancock Company, Inc., insurance brokers and adjusters of New York, advances a simple plan for financing insurance premiums (except life insurance) which involves a small down payment, depending upon the terms of the policy. No security, notes or endorser are required. The company points out many advantages of the plan and states that by using it manufacturers may avail themselves of cash discounts, utilizing the money they have previously advanced to insurance companies. In addition to this service, the Hancock company supplies insurance engineering service that frequently reduces present rates to insurers. Transactions are handled subject to the approval of the insured, through the same agents now handling his business and in the same companies.

Acquires Maryland Chemical Company

The American Cyanamid & Chemical Corporation, New York, has acquired the Maryland Chemical Company, of Baltimore, and will operate the latter as a subsidiary, under the direction of Samuel M. Leidy as vice president and general manager. The Baltimore company specializes in the sale of mineral acids, alkalis, alums, phosphates of soda, ammonia, silicate of soda, Glauber's Salt, and other chemicals in the Baltimore territory, including Washington, D.C.

Gloeckner Made District Sales Manager

Theodore M. Gloeckner, associated for 15 years with the sales organization of Union Drawn Steel Company, Massillon, Ohio, has been appointed district sales manager for the Philadelphia territory, effective January 1. Philadelphia offices of the company are 2030 Fidelity-Philadelphia Trust Building.

Handles Superior Engine Sales

The National-Superior Company, of Springfield, Ohio, manufacturers of gas and oil engines, announce that Roy E. Hoffmann will be in charge of sales of Superior Diesel Engines and Natural Gas engines in the Southeastern territory, with headquarters at Jacksonville. Mr. Hoffmann recently resigned as Manager of Diesel Engine Sales for the Fairbanks-Morse Company at Atlanta. The Superior line of Diesel engines includes stationary, portable and marine types for practically all kinds of service up to 800-horsepower units.

Caterpillar Tractor Promotions

President B. C. Heacock of the Caterpillar Tractor Company, Peoria, Ill., announced that H. P. Mee, vice-president and treasurer, succeeds George L. Bell, resigned, as a director and vice-president in charge of sales, and H. M. Hale, assistant treasurer, becomes treasurer.

McKinstry Heads International Harvester

Addis E. McKinstry has been elected president of the International Harvester Company, Inc., of Chicago, to succeed the late Alexander Legge. Mr. McKinstry has been with the organization for about 30 years. In 1919 he was elected vice-president, having charge of sales and collections, and in 1925 was elected a director. He became first vice-president in 1932, second in rank only to the president.

Kautz Joins Republic Steel

Karl Kautz, ceramic engineer, has joined the staff of Republic Steel Corporation, Youngstown, Ohio, and will specialize in research and field service on enameling sheets, according to Earl C. Smith, chief metallurgist. Present headquarters of Mr. Kautz are at Republic's Central Alloy Division at Massillon, Ohio. Mr. Kautz has had ten year's experience in vitreous enameling and is the author of several papers covering results of his research work in the field.

"Elesco" Bronze Castings

The Superheater Company, New York, which has been producing bronze castings at its plant at East Chicago, Ind., for its own use and for local manufacturers, has extended facilities of plant and laboratory to provide service on a much broader basis, under the direction of the Bronze Foundry division. The company is now producing bronze castings, rough or finished, in three distinct classes of mixtures — standard bronzes, aluminum bronzes and super-tensile manganese bronze—under the trade name "Elesco." These bronzes are described in Bulletin B-1.

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There's a reason --
Come and see for yourself

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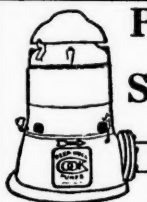
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IN STANDARD AND SPECIAL ANALYSES

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TRADE LITERATURE

Bridge Floor Construction.—The Carnegie Steel Company, Pittsburgh, Pa., subsidiary of United States Steel Corporation, New York, has issued an unusually attractive booklet devoted to T-Tri-Lok bridge floor construction, a light weight heavy duty floor with integral armor. In addition to descriptive matter, the publication presents engineering data for this construction with illustrations showing its use.

Enameled Iron in Architecture.—The American Rolling Mill Company, Middletown, Ohio, is distributing an attractively illustrated brochure discussing "The Relation of Porcelain Enameled Iron to Modern Architecture." Known as Armco Architectural Bulletin No. 12, the publication is said to appeal strongly to architects as a most complete treatise on porcelain enamel.

Toncan Iron Pipe.—The Republic Steel Corporation, Youngstown, Ohio, has issued a 64-page catalogue under the title of "Toncan Iron Pipe for Permanence." The publication, Form ADV. 220-B, presents authentic information on corrosion-resisting Toncan Iron Pipe—a product of Republic Steel Corporation. Another booklet issued, 222-B, deals with "the Technical Story of Toncan Iron Pipe."

LaBour Centrifugal Pumps.—Bulletin No. 40 has been issued by the LaBour Company, Elkhart, Ind., illustrating and describing LaBour Centrifugal Pumps. The publication outlines the LaBour principle and suggests many applications in which LaBour pumps are adapted.

"Caterpillar" Diesel Tractor.—The Caterpillar Tractor Company, Peoria, Ill., has issued a 48-page catalog featuring the "Caterpillar" Diesel Seventy-Five Tractor. The catalog is attractively printed in two colors and presents both action and model pictures, while a new page size 8½ by 11 inches permits the use of larger cuts that more clearly show the strength and size of the tractor.

Pittsburgh Plate Glass Facts.—In a statement to stockholders of the Pittsburgh Plate Glass Company, Pittsburgh, Pa., with their dividend checks payable January 2, President H. S. Wherrett is mailing a booklet entitled "A Few Facts," in which are set forth general information regarding the company under the four headings: A Few Facts, Foundation and Growth, Plants and Products, and Financial Control. On October 24 the company declared a quarterly dividend of 25 cents a share, an increase of ten cents a share over the quarterly dividend paid October 1. Dividends paid January 2 to 4936 stockholders totaled \$535,325, while the four quarterly dividends paid during the year ended December 31, 1933, amounted to \$1,498,913.

Florida Properties.—Further indication of business revival in the South is presented in a catalogue of Florida properties, issued by S. Kendrick Guernsey and Associates, Orlando, who from 40 years of experience proclaim their "absolute confidence in Florida and the potential worth of its real estate." The facts are emphasized that Florida has no state income tax, no inheritance tax and no bonded indebtedness, and proposes to exempt homesteads up to \$5000 from taxation. The individual advantages of 21 cities are set forth.


Water Works Pump Development.—Economic developments which have taken place in water works pumping machinery during the past 20 years are outlined in a paper presented before the American Water Works Association at its annual meeting in Chicago, by A. Peterson, chief engineer of the Pump Department of the De Laval Steam Turbine Company, Trenton, N. J. The company has had the paper printed for general distribution.

Grasselli Precipitated Barium Carbonate.—The Grasselli Chemical Company, Inc., Cleveland, Ohio, has issued Bulletin G-2 on Grasselli Precipitated Barium Carbonate for the prevention of efflorescence in building construction—a problem that confronts the architect, brick manufacturer, contractor and builder.

Bank's Relations With Customers.—Under the title of "A Bank's Relations With Its Customers," The Guaranty Trust Company of New York has published for complimentary distribution among business executives a 100-page booklet. The booklet stresses the need for closer cooperation and better understanding between business men and banks.

Alundum Polishing Grain.—To meet exacting demands of industry, the laboratories of Norton Company, Worcester, Mass., have developed Alundum Abrasive for polishing metals, etc.—a product whose chemical composition resembles the ruby and sapphire and whose main characteristics are toughness and hardness. It is described in detail in an illustrated booklet now being distributed by the company.

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<p>Tanks & Vats for Acid Storage NH₂ Storage Aluminum Alloy Steels Lead Lined Monel Metal Tin Lined</p>	<p>Boilers—HRT and Manning Jacketed Kettles Agitator Tanks Bubble Towers Gas Scrubbers Welded Steel Pipe Cresoting Cylinders</p>
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This applies to field as well as shop built equipment.

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Some especially desirable attributes must surround Davis Tanks—when you realize that leading manufacturers and railroads of the South have bought them repeatedly for 46 years. In truth, there are two reasons:

1. Cypress is unequalled for durability, low depreciation and varied usefulness in storage, processing and handling chemicals and other liquids.
2. Davis tanks, built by modern machinery and skilled men, can be made to fit any factory need, in any size and shape. Catalog on request.

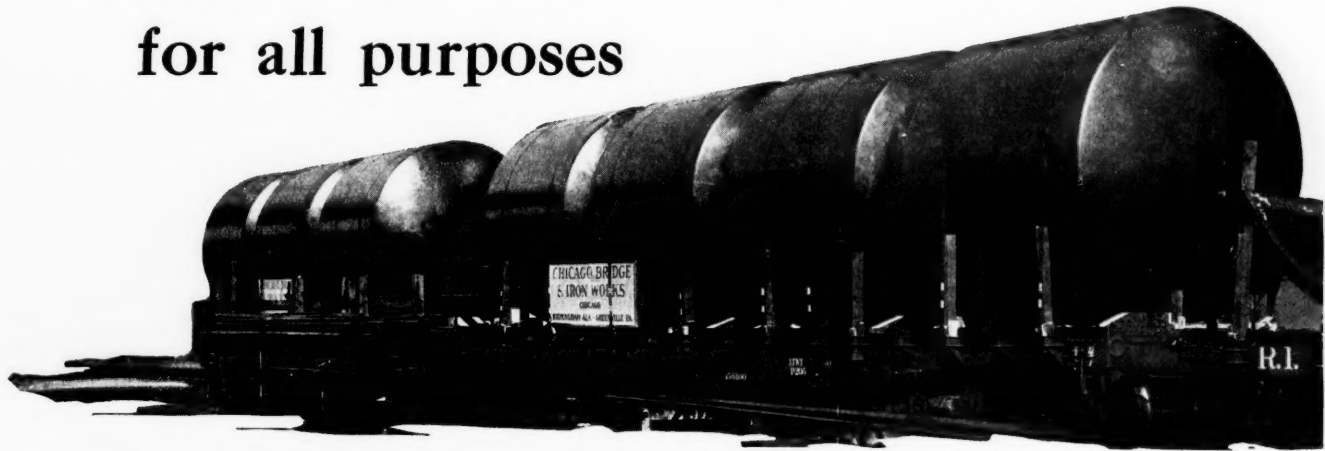


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Shop built tanks are often used in breweries, distilleries and process plants of all kinds.

Proper designs are furnished when they are required to withstand pressure. Brewery installations are furnished plain or coated inside.

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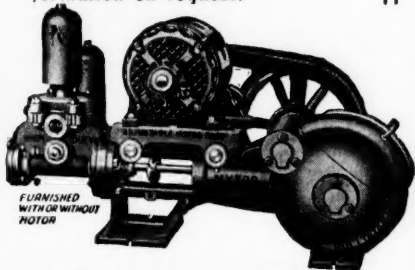
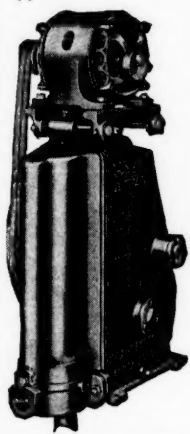
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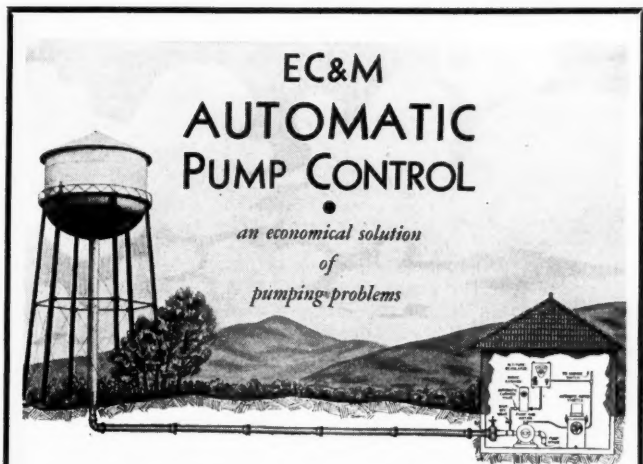
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It will pay anyone who is interested in new pumping equipment to thoroughly investigate the Myers line of Hand and Power Pumps for every purpose.

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The Level Here

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The EC&M System of Automatic Pump Control is of extreme importance to the engineer or water works official in the solution of pumping problems involving close regulation of tank-levels or pressures. Through the use of this ultra-sensitive and accurate control, one or more pumps can be automatically started and stopped so as to maintain levels or pressures within extremely close range of the maximum working value of a system. As illustrated above, it is not necessary to run pilot lines or control wires from the tank to the pump house. Let us send you complete information.

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Name Company

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\$76,000,000 Industrial Expansion

(Continued from page 15)

the Illinois Central as a barometer, it is an incontestable fact that recovery has progressively moved forward since the advent of Spring 1933.

"The territory served by the Illinois Central in the South by reason of increased purchasing power resulting from recovery measures will henceforth present a fertile field for new industrial development. Never before, since the Civil War, have there been evidences of a greater potential buying power in the South. The new buying power will mean substantial increase in retail sales. Increase in retail sales will bring a larger number of wholesale establishments into being as a result of increased distribution. The cumulative effect would be a strong tendency toward decentralization of industry as a means of effecting a more equable geographical distribution of industrial production."

Marked Improvement Noted in Norfolk and Western Territory

A. C. Needles, president, Norfolk and Western Railway Company, Roanoke, Va., writes:

"Taken as a whole, I think the country has made some progress toward recovery during 1933, which should continue this year in view of the early fruition of the Government's comprehensive works program. With the apparently growing sentiment that recovery is inevitable adding impetus to the movement, I believe we can be hopeful of a reasonable measure of improvement in 1934."

In summarizing some of the outstanding facts about the development of manufacturing in the Norfolk and Western territory, T. Gilbert Wood, general industrial agent, cites that:

"Industrial development in our territory during the 11 months ending November 30, 1933, showed a marked improvement over the same period of 1932, which indicates increased interest and steady progress. There were located in territory traversed by the Norfolk & Western Railway 118 new plants and additions to established plants, with a total investment of \$17,053,300 and employing 1,431 operatives. For the same period of 1932 there were 106 new plants and additions to established plants, with an investment aggregating \$9,427,000 and employing 4,421 operatives. These figures indicate a steady advancement in the industrial growth and development of the territory.

"The creative development program of those rail carriers who have maintained this service during the depression years, which has resulted in employment for many hundreds of people who otherwise would have been idle, has been beneficial to the territories in which these lines operate and stabilized to a considerable extent the morale of its population.

"The territory served by the Norfolk & Western Railway is favored by a diversity of raw materials, an economic labor situation and a strategic location with relation to large consuming centers. These are among the major influences in the steady march of progress in this sec-

tion of the country. In addition, a gradual increase in business during the past few months has also had its influence in the continued progress of industrial development.

"With the close of the year we are very optimistic for the future development of this territory and have more active prospects than we have had at any time since 1929."

Paper Making Possibilities in Southeast

For the first ten months of 1933, 91 new industries were established on Seaboard rails, states Warren T. White, general industrial agent, Seaboard Air Line Railway. This compared with 84 for the same period of 1932, and Mr. White points out that

"not many of these concerns could be classed as strictly manufacturing enterprises, as they include oil station bulk storage facilities, food warehouses, citrus packing houses, etc. The outstanding development in the territory during 1933, from the standpoint of industrial potentialities, is the achievement in making newsprint and sulphite pulp from Southern pine and from which other white papers are produced in the experimental paper plant at Savannah. This development and the possibilities which it opens up for the South are important. It has started a train of inquiry and comment which is attracting more attention every day to the possibilities for pulp and paper manufacturing in the South and will ultimately result in vast developments along this line in the reasonable near future. This is causing others to look to the South, and there are some definite indications that private pulp and paper concerns will resume investigations of pulp and paper opportunities in the South which were started a few years ago but were discontinued when the depression came on."

Referring to the fact that industrial expansion at points served by the Southern Railway System was substantially larger in 1933 than in 1932, J. C. Williams, manager development service, stated that a preliminary tabulation indicated there were 50 new industries established having a total investment value of over \$6,000,000 and 46 enlargements of existing plants represented an investment of more than \$5,000,000. This industrial expansion included the textile groups, breweries and distilleries, iron and steel, wood products, and miscellaneous manufacturing plants. Strictly local enterprises were omitted. Breweries and distilleries contributed the larger investment amounts; revival of brewing stimulated the cooperage industry and the expansion of the knitting mill and garment manufacturing industries continued. Textiles, including rayon, lead in plant enlargement programs both in number and value.

Between January 1 and November 15, 1933, there were 48 new industries established in the territory traversed by the Atlantic Coast Line Railroad, writes C. McD. Davis, vice president of the Coast Line. Location of the large bromine extraction plant near Wilmington, N. C.,

was the most important development. Twenty-two industries were established in Florida, 13 in North Carolina, 7 in Georgia, 3 in Virginia, 2 in Alabama and 1 in South Carolina. Cold storage, vegetable packing, saw and planing mills predominated. Commenting on the industrial accomplishments, Mr. Davis states, "briefly, 1933 has not differed materially from the preceding depression years as to the character and scope of industries situated in our territory which is principally an agricultural and raw material region."

R. S. Henry, assistant to vice-president of the Nashville, Chattanooga & St. Louis Railway, Nashville, Tenn., stated that 14 manufacturing plants and 5 plant expansion programs were undertaken in 1933, and the industrial department is actively working on several large projects that will mean much to the territory if secured.

E. J. Hoddy, general industrial agent, Louisville and Nashville Railroad Company, Louisville, Ky., reports a continuation of the average growth during the past few years and that progress has been made in diversifying manufactures from silk to heavier metals and from sewing trades to the handling of dimension materials with brewing and distilling lines and cooperate products most active. He writes:

"There is increasing manufacturing interest in the smaller cities and towns, and an eagerness to cooperate with substantial managements in larger degree than ever before. Industries have been taken over by organizations more strongly entrenched financially and there is a better demand for buildings adapted to manufacturing purposes. A number of strong companies are negotiating for new locations and much is hoped for from the plans which have been broached. In the near future there should be expansion along chemical and mineral lines."

I. B. Tigrett, president, Gulf, Mobile and Northern Railroad Company, Mobile, Ala., announced that 18 new industries and 4 major expansion programs were undertaken in his territory during 1933. Seventeen of the new enterprises were established in Mississippi and one in Louisiana, while three of the plant improvements were in Mississippi and one in Tennessee.

The Pan-American Airways passenger terminal development costing \$225,000 was the largest engineering job in the Florida East Coast Railway territory with several breweries being established at various points on its line, states Scott M. Loftin, co-receiver.

Naval stores plants, lumber and building material handling, hide and fur and vegetable packing warehouses were established along the Atlanta, Birmingham and Coast Railroad Company, writes B. L. Bugg, president.

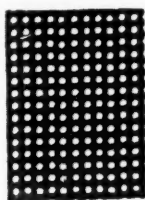
(Continued on page 42)

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THE NORTH CAROLINA GRANITE CORP'N
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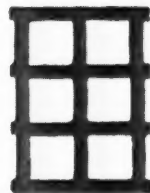
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Decay and Termite Proof—Can Be Painted

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Plants at: New Orleans; Winnfield, La.; Louisville, Miss.;
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Northern Hard Rock Maple Flooring

Holt Hardwood Co., Oconto, Wis.

MEMBERS OF MAPLE FLOORING MANUFACTURERS ASSOCIATION

\$76,000,000 Industrial Expansion

(Continued from page 40)

Substantial Industrial Development in Southwest

Turning to the Southwest, there is listed along the Missouri Pacific Lines an increase in the number of major industrial developments of more than 15 per cent and an increase in capital invested of 784 per cent in 1933 compared with 1932. A total of 255 enterprises were established or expanded with a capitalization of \$28,111,000 and expected to furnish a tonnage of 145,597 cars of freight. Texas, with 176 new units and capital of \$23,197,000 led, with 44 units capitalized at \$559,000 in Arkansas and Louisiana had 35 new enterprises capitalized at \$4,374,000. The foregoing figures do not include several major expansion programs that have been approved but on which work has not begun. In commenting on the industrial development of 1933, L. W. Baldwin, president of the Missouri Pacific Lines, makes this significant statement:

"The suspension of plant operations during the year have been inconsequential. A number of plants that closed during the past three years have within recent months resumed operations. This is especially true of the lumber industry, including stave, cooperage and box material manufacturers. The petroleum industry, particularly in Texas, has shown a large increase in the units established and capital invested. The chemical industry in the Southwest showed great progress during the year. Immediate construction is reported to begin on the large alkali plant at Corpus Christi, Tex., and another alkali plant at Lake Charles, La. The Freeport Sulphur Company is building a sulphur plant at Grandepont, La.

"We are particularly gratified to see this trend of the chemical industry to the Southwest where there are so many economic factors, including raw material resources, which we have for the past several years emphasized to the major chemical industries throughout the country."

Arthur E. Gilman, manager of industrial development, Missouri-Kansas-Texas Lines, St. Louis, reports that development in 1933 was greater than in the previous two years. This development for the first 11 months of 1933 included the establishment of 153 new enterprises with an investment of approximately \$6,332,000 as compared with 142 enterprises and an investment of \$1,649,000 in the 12 months of 1932 and 147 enterprises and an investment of \$3,885,000 in 1931.

"Much of the progress in 1933 was made in the food group. Manufactories, new mines and quarries, construction industries, and new petroleum industries, did not come up to the records of previous years. Inability to finance new projects involving long term invest-

ments, was the chief factor contributing to this decline.

"In our work during the year we have found a growing interest in Southwestern markets on the part of national distributors. Much of our activity during the last six months has been related to the location of branch warehouse distribution units for such concerns.

"Any serious disintegration of basic industries in our territory will, in all probability, be prevented. The National Recovery program has evidently averted an imminent breakdown in the basic petroleum industry. Adjustments are badly needed in agriculture, but here recovery will be more difficult to achieve. When and if our farms can be operated on a profitable basis, our territory will begin to make notable progress. But like much of the rest of the country, a return of prosperity is contingent upon a reduction of debt, interest and tax load, the establishment of sound credit conditions, equitable prices for agricultural products, productive employment, the removal of barriers blocking the flow of goods in both domestic and foreign channels, and the restoration of confidence. Gradually the problem is being better understood, but recovery necessarily will be slow.

"Out of the economic adjustments now in progress, we expect to come to a new day for Southwestern industry, in which its natural resources and advantages will prevail over the other conditions that have led to the present unbalanced economic industrial development of the country. But in connection with this readjustment, differentials in cost necessarily need to be preserved to enable new industries in the developing territory to compete with the distribution set-up of well established industry in other sections. Industrial codes, which have been formulated hurriedly, will unquestionably have to be modified in many respects to permit normal industrial development in the Southwest.

"The immediate problems connected with industrial development in our territory are, therefore, numerous and complicated. New development, more than ever before, must have careful and painstaking analysis of all the factors relating not only to source of supply and market outlet, but to differentials in labor cost, essential to enable new industry to compete, in a territory which, as yet, has a sparsely settled population and relatively low buying power, with the inflow of excess production from regions highly developed, where a market exists close by for the major portion of their manufactured products.

"The Southwest remains the one vast section of the country that, from an industrial development standpoint is still in its early stages of growth. Here there exists a definite need for sound industrial development. We are glad to say that we expect sufficient favorable upturn in conditions during this year to enable us to bring about more substantial new industrial development than has been possible during the past three years."

A. Leckie, industrial agent, The Kansas City Southern Railway Company, Kansas City, Mo., reports that 39 projects covering a wide variety of enterprises were undertaken on company lines in 1933. While he states that "industrial development has continued at a rather low ebb during 1933, it seems the situation is getting much better as I find

there are more inquiries, and also that a number of projects which have been dormant have been revived, and concerns are again giving consideration to the establishment of plants."

F. W. Hoover, industrial development department, the Commonwealth & Southern Corporation, writes that during the 11 months ending November 30, 1933, 66 new industries and major additions to existing industries with an investment of over \$4,000,000 represent the development in the territory served by the following power companies:

	No. of estab-	Estimated Capital Invest-ments
The Tennessee Electric Power Co.	10	\$605,000
Alabama Power Co.	18	468,500
Georgia Power Co.	23	1,050,500
Mississippi Power Co.	9	2,135,000
South Carolina Power Co.	6	59,000

These industries gave employment to 6,118 persons and their estimated annual payroll is \$3,826,000.

Among individual cities, Houston Texas reported for the first 10 months of 1933 that 33 new manufacturing plants were established, 187 merchandizing enterprises, 31 financial, 20 real estate, 154 petroleum and 220 classified as miscellaneous.

During the first 10 months of 1933, the Industrial Bureau of St. Louis announced the establishment of 123 new industries, a gain of 24 per cent over the corresponding period of 1932. Expansion programs were undertaken by 112 industrial enterprises, a gain of 19 per cent. Total investment was \$21,442,000, or an increase of 93 per cent. Additional employees numbered 9,839. New enterprises included building and construction materials, iron and steel products, chemicals, clothing, paper products, food products, brewing, furniture, etc.

The Industrial Bureau of Baltimore reported for 1933 the establishment of 81 new industries with a plant investment of \$6,190,000 which gave employment to 4,150 workers. During the same period 51 plant expansions representing an investment of \$1,551,000 were completed.

Major industrial expansions in the New Orleans territory, according to Wilson S. Callender, publicity secretary, New Orleans Association of Commerce, included the establishment of five new manufacturing plants and seven extension programs for existing manufacturing enterprises, the largest being one of \$400,000 for the production of tin cans by the Continental Can Co., and a \$100,000 plant of the Wilsch Bennett Mfg. Co., for making steel drums.

Based on the facts given in this résumé of the industrial expansion of the South, in a depression year, there is reason to expect a great increase in development in the immediate future.



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South's Highway Program

(Continued from page 17)

The total mileage of the Arkansas program is 576, involving the expenditure of \$11,524,000. This program was started in the fall of 1933 and on January 1, 1934, one-third of the work was under contract.

The program is divided as follows:

Primary System—398 miles, including: Cement concrete, 74 mi.; bit. surface treatment, 151 mi.; bit. road mix, 132 mi.; grading and draining, 60 mi.; sand asphalt, 21 mi. and landscaping 30 mi.—Total cost \$7,339,000.

Secondary System—90 miles, including: Bit. surface treatment, 74 mi.; gravel, sand and clay, 12 mi.; bit. road mix, 2 mi.; grading and draining, 1 mi. and cement concrete, 1 mi.—Total cost \$2,090,000.

Municipal Projects—88 miles, including: Bit. surface treatment, 26 mi.; cement concrete, 39 mi.; bit. road mix, 15 mi.; limerock asphalt, 5 mi.; sand-asphalt, 1 mi.; grading and draining, 2 mi.—Total cost \$2,095,000.

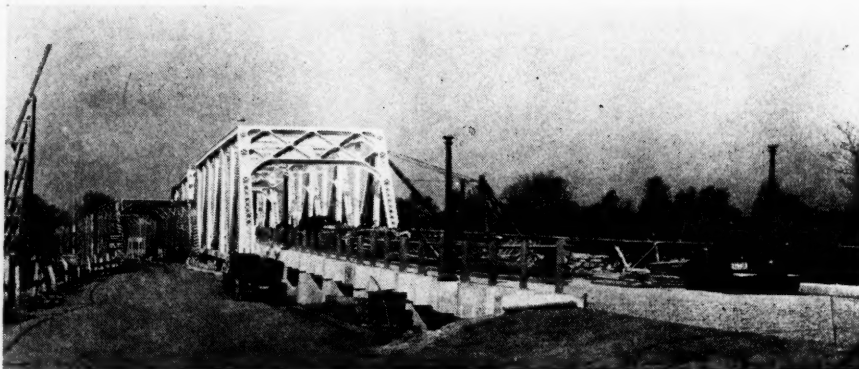
MISSISSIPPI. Early this month \$1,000,000 worth of road construction projects will be let to contract, making a total of \$4,500,000 of approved projects out of the \$10,000,000 recovery program for the State. Projects included in the latest letting consist of relocating, grading and drainage, with some paving, in 12 counties.

FLORIDA. The State Road Department has awarded contracts exceeding \$4,000,000 for road construction financed by the Federal Government, and has received bids for an additional \$475,000 group of projects, awards for which will shortly be announced. A total of \$5,231,000 is available for the State.

MISSOURI. The tentative program of the Missouri State Highway Department calls for the expenditure of \$12,380,000 in 1934 including the following: Earth grading, 45 mi., \$630,000; gravel surfacing, 250 mi., \$2,400,000; oil mat, 420 mi., \$1,100,000; retread, 30 mi., \$600,000; 10-foot concrete, 90 mi., \$1,900,000; 20-foot concrete, 150 mi., \$5,100,000, and 30-foot concrete, 3 mi., \$650,000.

Work done in 1933 includes 1678 miles of grade earth, 1321 miles of gravel surfacing, 289 miles of concrete pavement, and 394 miles of miscellaneous construction.

NORTH CAROLINA. Total amount of funds available for North Carolina State Highway construction exceed \$6,785,000 made up of Federal aid, 5 per cent; emergency Federal relief, 94 per cent, and state appropriation, 1 per cent. About 780 miles of grading are included in the 1934 program, 500 miles of oil treatment, and 80 miles of concrete or asphalt paving. Beautification projects costing \$100,000 will be undertaken.



New Dover Bridge, Near Easton, Md.

Construction by Maryland State Roads Commission; Sanford & Brooks, contractors. Three through truss spans with total length of 841 feet; central span swings for draw; eight approach slab spans; 24 feet clear roadway; concrete floor on fixed spans; interlocking steel channel floor with asphalt plank surface on swing span. Total length, including approaches, 2,666 feet

Projects in cities and towns will entail an expenditure of \$2,000,000.

GEORGIA. During 1933, 556 miles of highway were paved. This gives the State a total of 3,475 miles of paved highways.

TEXAS. The amount allotted to the State Highway Department under the National Recovery Act was \$24,244,000. Up to December 15 contracts totaling \$12,748,000 were let, of which amount \$2,000,000 is State funds and the balance Recovery funds. Bids were received on December 18 for projects estimated to cost \$1,925,700, and it is expected that the remaining Recovery projects will have been placed under contract by the end of January, 1934.

On November 30 projects under construction included 2042 miles of roads to cost \$16,762,000 and bridges to cost

\$1,825,000.

WEST VIRGINIA. The State government in 1933 took over all public roads for administration, construction and maintenance, adding 31,000 miles of former county-district roads to the State system of 4,417 miles. Local road taxes were automatically abolished.

Total payments for State highway construction last year were \$5,516,000, and maintenance expenditures totaled \$1,814,000.

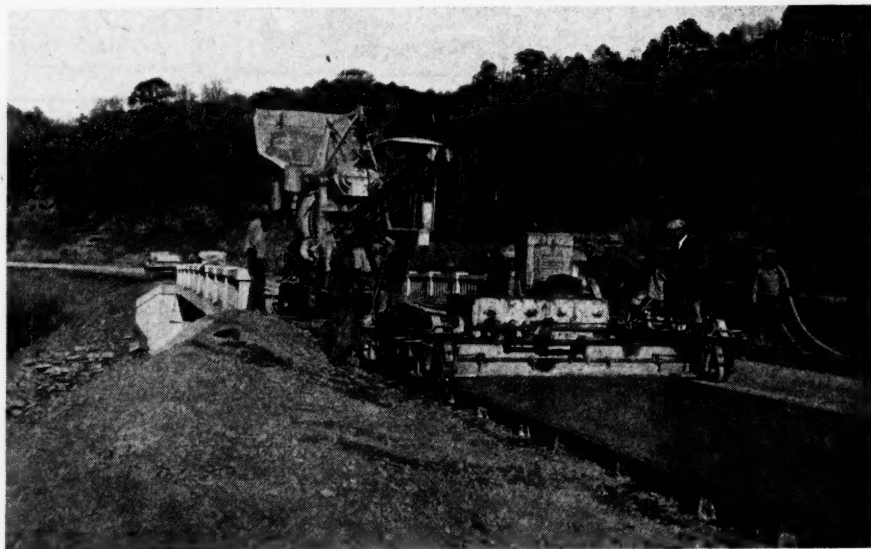
Construction completed in 1933 totaled 231 miles; 15 bridges and 134 miles of roads were let to contract and carried over into this year.

New St. Francis River Bridge, Arkansas

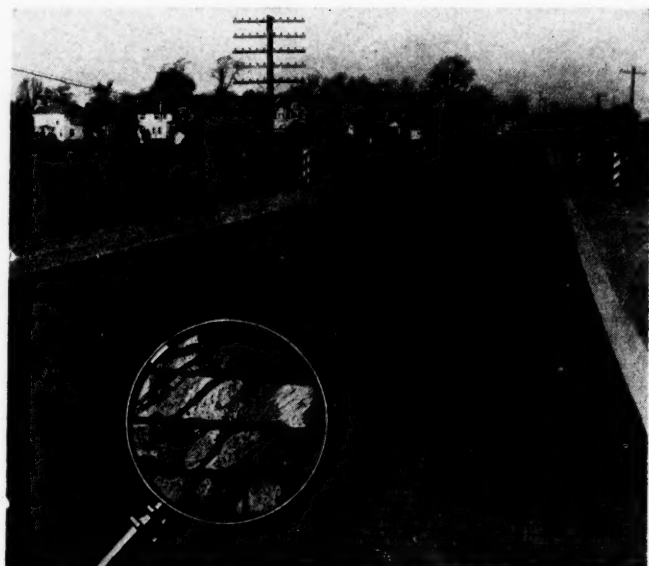


Wayne County, West Virginia

Concrete paving job by Hatfield Construction Co., contractors



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SHOWN pictorially above, are the results obtained by using a new method of applying and removing excess asphalt filler in the construction of brick pavements. Described in a few words, a dilute "separating" mixture is sprayed on the brick which prevents adhesion of the asphalt to the top of the brick where it is not needed but allows a perfect asphalt bond between the sides of each brick. Excess asphalt from the top of the brick is quickly and efficiently removed and then re-used. This method has been increasingly employed with excellent results by builders of brick pavements during the last two years and has much merit in ease of application, economy of materials and certainty of a well-finished job.

Detailed specifications for this method are available from National Paving Brick Association, National Press Building, Washington, D. C.

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Motor Vehicle Output Increased 43 Per Cent

Preliminary figures issued by the National Automobile Chamber of Commerce show that 2,048,000 motor vehicles—1,685,000 passenger cars and 363,000 trucks—were produced in the United States and Canada in 1933. This is a gain of 43 per cent over 1932.

Motor vehicles, accessories, service equipment and replacement of parts and tires manufactured in 1933 were valued at \$1,655,928,000. The wholesale value of the motor vehicles was \$970,200,000; parts and accessories \$425,728,000, and rubber tires for replacement \$260,000,000. Tire shipments reached 43,000,000 in 1933.

There were 23,720,000 motor vehicles registered in the United States in 1933 of which 20,525,000 were motor cars and 3,195,000 were trucks. The United States has 72 per cent of the motor vehicles of the world.

Total expenditures for highways and streets in 1933 were \$1,550,000,000. Total motor vehicle user taxes amounted to \$1,170,000,000 and gasoline taxes, Federal, State and municipal amounted to \$716,000,000. The percentage of motor user taxes to all taxes from all sources—Federal, State and local was 11 per cent.

The automotive industry is the largest purchaser of gasoline, rubber, alloy steel and malleable iron, mohair, upholstery leather, lubricating oil, plate glass, nickel and lead. The industry created 2,621,000 carloads of freight which were handled by the railroads of the country in 1933.

MOTOR TRUCKS

Motor trucks in use.....	3,195,000
Number of trucks owned by farmers (26 per cent of all trucks).....	830,000
Motor truck owners.....	2,500,000
Common carriers, per cent of all trucks.....	51½
Contract carriers, per cent of all trucks.....	9
Privately owned and operated trucks.....	86
Total motor truck taxes...	\$295,000,000
Trucks represent 13 per cent of all motor vehicles and pay 25 per cent of all motor taxes.	

MOTOR BUSES

Motor buses owned.....	105,000
Number of buses in revenue service.....	45,900
Number of buses in local of transit service.....	17,500
Buses used by consolidated schools.....	60,000
Buses used by street railways.....	12,225
Street railways using motor buses.....	235
Steam railroads using motor buses.....	60

The motor vehicle retail business in the United States includes 36,500 car and truck dealers; 98,161 garages, serv-

ice stations and repair shops; 60,865 supply stores, or a total retail outlet, duplications eliminated, of 103,161. There were 5,465 wholesalers and 317,000 gasoline filling stations.

Proposed Amendments to Securities Act

(Continued from page 12)

ficial effect of educating the public in the care they must use in making investments.

2. The Act provides that any suit must be brought by a purchaser within two years of the discovery by him of the misstatement of the fact or omission in the Registration Statement or Prospectus, and that in no event shall a suit be brought after eleven years. This, of course, fixes the period of limitation at eleven (11) years.

The market value of securities is not wholly dependent upon the intrinsic worth of the properties they represent. Securities are worth what someone is willing to pay at the particular time. We have seen this repeatedly during the past four years; and when no one wants to buy, market values drop to absurdly low levels. Such variations depend primarily on a large number of variable factors and are not predictable with any degree of certainty. And it is generally believed that broad, general variations in values occur in cycles of more or less general average frequency.

To be held to the heavy responsibilities imposed by the Act, when, in point of actual fact, the loss suffered by the purchaser has been due solely to a general shrinkage of values of the nature described, imposes potential liabilities of such large volume that it is not surprising if careful, honest men do not incur it.

It would seem that this feature of the Act might well be amended, not by changing the length of time, but by providing that the purchaser should have no right to recover in the event that there had been, subsequent to his purchase, an available market for the security at a price higher than that at which he purchased, and the burden of establishing the available market might well be put on the issuer.

3. The Act has been justly criticised for certain vagueness in terms. While it is difficult to define the materiality of a misstatement or omission, it would seem rather necessary to make the effort to do so. The situation is quite different from that presented by the Sherman Anti-Trust law. In that Act, Congress did not define the statement "unreasonable restraint of trade" and the courts in determining whether any particular act falls within the prohibition of that statute apply the "rule of reason." Those cases are heard before and decided by judges, men who have been long trained in the difficult task of considering evidence and reaching conclusions therefrom. The liabilities imposed by the Securities Act, how-

ever, will be tried before and decided by juries; so that, whereas under the Sherman Anti-Trust law there has been accumulated a body of opinions and rules to guide business men in their activities, it is apparent that there can be no continuity in decisions by juries. Under the Securities Act there is every probability, for example, that on the same set of facts different juries would reach entirely different conclusions. Such a situation would not only be unfortunate for one against whom a suit was brought, but is bound to act as a deterrent to legitimate activity in difficult and intricate undertakings where some slight error might inadvertently be made in entire good faith with attendant liabilities, tremendously large in amount, and no fixed rule to determine their imposition. It must, therefore, be clear either that the terms of the Act in this respect must be more specifically defined or special provisions should be incorporated regarding the enforcement of the rights given to purchasers by the Act so that there would be a continuity of opinion in connection with the degree of materiality and the degree and nature of the proof required.

It is believed that the amendments herein suggested are simple and understandable and would do much to remove the uncertainties necessarily causing a serious restriction on the flow of capital, while at the same time, not impairing the fundamental aims of the Act, namely: adequate protection of the purchaser and proper restraints on issuers and underwriters.

Government Test for Securities

Believing that the questionable securities issued during the boom period had as much or more to do with causing the depression than anything else, Walter E. Long, manager of the Chamber of Commerce, Austin, Texas, writes:

"I compliment you most highly on the December MANUFACTURERS RECORD cover page editorial, 'Questionable Securities.' I sometimes think they had everything to do with the bringing on of the depression. These doubtful securities have ruined thousands of small banks, swept away the savings of those who were thrifty and wrecked communities.

"A gullible, gambling America needs a guardian and since the Government is establishing guardians for all lines of business it might just as well establish (10 years late) a guardian who will test the validity of every security put on the market. Until this is done and some sort of a Government protection is put back of securities there is no reason why people who have a little money should want to invest it in any kind of security. The two safest places to put it are in real estate, or bury it in a safety deposit box.

"It must not be forgotten that most people have used up nearly all of their reserves. Very few people will lend money on mortgaged property and take a second lien, and few people own anything outright. Until reserves are built up we shall not be in a very happy condition in this country."

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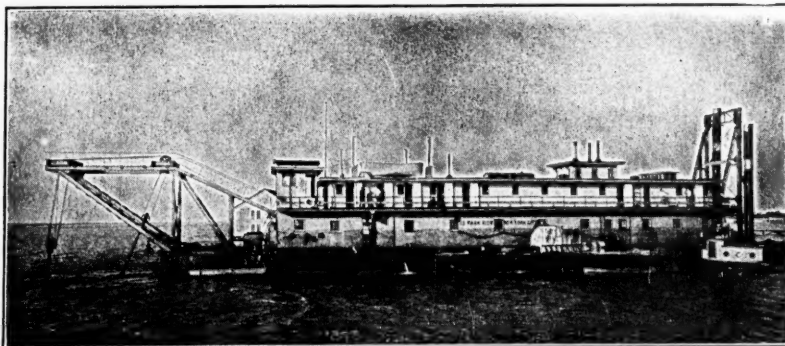
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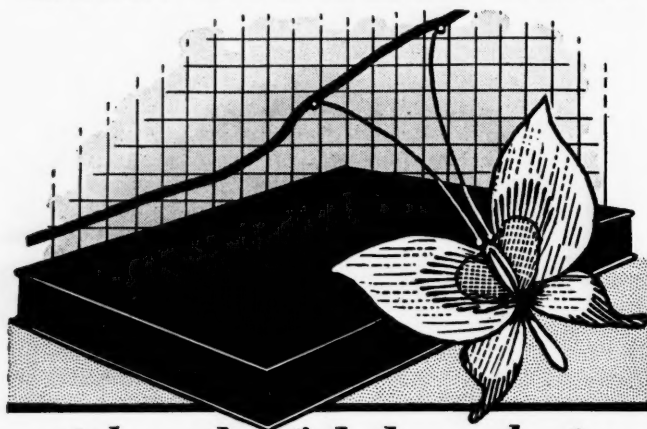
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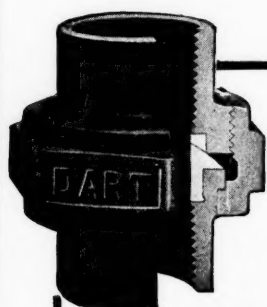
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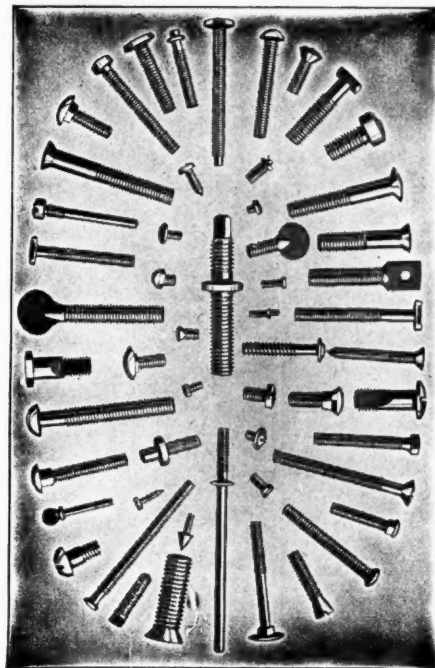
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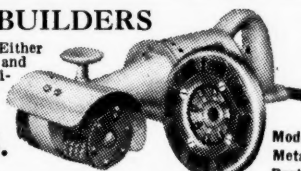
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If you will send us a few names of this kind we will appreciate it and will mail them a copy of the MANUFACTURERS RECORD with an appropriate letter, and invite them to enjoy the advantage of reading and using the paper regularly; and we will also make them a special offer which should prove attractive.

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CLOCKS FOR ALL PURPOSES
Time Recording Devices and Supplies
Buy Our Rebuilt
Time Recorders and Watchman's Clocks.
They are Fully Guaranteed.
L. E. Kaiser and Sons, Inc.
221 N. Liberty St., Baltimore, Md.
24 Hour Service on Repairs

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For Sale
at 10% of Cost
8500 Spindles
260 Looms
360 H.P. New Diesel Engines
Brick Buildings
Good Tenant Houses
Low Taxes—Good Location
A Bargain
For further information communicate—
No. 9188, Care Manufacturers Record

■ Men Wanted

SALARIED POSITIONS
\$2,500 to \$25,000
This thoroughly organized advertising service of 24 years recognized standing and reputation carries on preliminary negotiations for positions of the caliber indicated, through a procedure individualized to each client's personal requirements. Several weeks are required to negotiate and each individual must finance the moderate cost of his own campaign. Retaining fee protected by a refund provision as stipulated in our agreement. Identity is covered and, if employed, present position protected. If you have actually earned over \$2,500, send only name and address for details.
R. W. RIXBY, INC.,
103 Delward Bldg., Buffalo, N. Y.

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ZELNICKER COMPANY, 58 St. Francis St., MOBILE, ALA., solicits agencies for steel and clay products and building material specialties. Satisfactory representation assured. 18 years' experience. Close contact with architects.

ATTENTION MANUFACTURERS. Do you want an agent or distributor, thoroughly reliable, to represent you in St. Louis territory? Familiar with woodworking industry and general contractors. No. 9260 c/o Mfrs. Record.

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CINNABAR ore for sale. Two tracts with rich cinnabar (quicksilver) ore deposits in the new Arkansas field. Acme Products Co., Nashville, Arkansas.

■ Inventions for Sale

MANUFACTURERS—Write for our FREE Classification Sheet of Inventions for Sale, covering 135 main subjects, and in one or more of which you will doubtless be interested. ADAM FISHER MFG. CO., 578 Enright, St. Louis, Mo.

■ Machinery and Supplies

FOR SALE OR TRADE: One Scotch Marine Boiler with stationary engine compound, 150 H. P., each fully equipped with oil burning equipment and water pumps, stack, etc. P. O. Box 2411, Ft. Lauderdale, Fla.

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\$6,000,000 annually leaves the South for lemons transported half way around the world. A good, thin skin, juicy, commercial size lemon, adapted to Florida growing conditions, has been developed and proved—a problem that took 20 years to solve. Advise the amount you could invest and we will submit a sound proposition offering unusual opportunities.
DESOTO NURSERIES, DeSoto City, Fla.

BARGAIN—COMPLETE LUMBER BUSINESS, Saw, planing and trim mills; also finest tourist camp south. Write for full description and price. Address No. 9259 c/o Mfrs. Record.

MOVE YOUR PLANT TO JACKSONVILLE, FLORIDA.
Location in city or just outside of limits. Water, rail and truck transportation. Will give long-time lease or sell. No cash required from party who has a business with prospects.
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SEYMOUR & BRIGHT, Registered Patent Attorneys. Established 1876. PATENTS, TRADEMARKS, COPYRIGHTS. Prompt and thorough service. Suite 892, National Press Building, Washington, D. C.

PROPOSALS

Bids close Jan. 30, 1934.

Police Station and Jail

NOTICE OF CONTRACT BID

Inviting Bids for Atlanta Police Station and Jail, Atlanta, Georgia.
STATE OF GEORGIA,
CITY OF ATLANTA.
The City of Atlanta, Georgia, will receive sealed bids for the construction of Police Station and Jail as hereafter designated, at the time and date set out below, to wit:

GENERAL CONTRACT

Bids for furnishing all material, labor, plumbing, heating, electrical work, and all other items necessary for the general construction and completion of the Atlanta Police Station and Jail located in Atlanta, Georgia, will be received by the City of Atlanta, Georgia, until 1 P. M. on the 30th day of January, 1934, at which time all bids will be publicly opened and canvassed and the Contract let to the lowest responsible bidder, unless all bids are rejected as hereinafter provided. Bids will be opened on the Second Floor, City Hall, in the presence of the Committee. Plans and specifications for this building may be obtained at the office of Burge & Stevens, Architects, 101 Marietta Street Building, Atlanta, Georgia, on or after 12 Noon January 20th, 1934. A certified check for \$25.00 for general contractors, and \$10.00 for sub-contractors will be required as a deposit for plans by Architects, which will be refunded if a bona fide bid is submitted.

JAIL EQUIPMENT

At 1 P. M. on the 30th day of January, 1934, the City of Atlanta, Georgia, will also receive bids for the necessary jail equipment consisting of prison locks, locking devices, gratings, cell doors, stationary bunks and all other jail equipment necessary for the completion of the Atlanta Police Station and Jail, located in Atlanta, Georgia. Plans and specification for this work may be obtained at the office of Burge & Stevens, Architects, 101 Marietta Street Building, Atlanta, Georgia, on or after 12 Noon January 20th, 1934.

A certified check for \$25.00 will be required as a deposit for plans by Architects, which will be refunded if a bona fide bid is submitted.

ELEVATORS AND ELEVATOR ENCLOSURES

At 1 P. M. on the 30th day of January, 1934, the City of Atlanta, Georgia, will also receive bids for the complete installation of elevators and all equipment in connection with the same including elevator

doors, cars and signal systems necessary for the completion of the Atlanta Police Station and Jail, located in Atlanta, Georgia.

Plans and specifications for this work may be obtained at the office of Burge & Stevens, Architects, 101 Marietta Street Building, Atlanta, Georgia, on or after 12 Noon January 20th, 1934.

A certified check for \$10.00 will be required as a deposit for plans by Architects, which will be refunded if a bona fide bid is submitted.

KITCHEN EQUIPMENT

At 1 P. M. on the 30th day of January, 1934, the City of Atlanta, Georgia, will also receive bids for the complete installation of all kitchen equipment consisting of steam tables, ranges, dish washers and all food preparing equipment necessary for the completion of the Atlanta Police Station and Jail, located in Atlanta, Georgia.

Plans and specifications for this work may be obtained at the office of Burge & Stevens, Architects, 101 Marietta Street Building, Atlanta, Georgia, on or after 12 Noon January 20th, 1934.

A certified check for \$10.00 will be required as a deposit for plans by Architects, which will be refunded if a bona fide bid is submitted.

The City of Atlanta, Georgia, reserves the right to reject any and all bids, and to waive all formality in connection therewith in their discretion.

Each and every bid submitted in pursuance of this advertisement must be addressed to Mr. Ed Gilliam, Chairman of the Building Committee, in care of the Office of the City Purchasing Agent, Atlanta, Georgia; and all bids submitted must be accompanied by a certified check on a solvent bank of Atlanta, Georgia, for a sum equal to 5 per cent of the amount of each bid. Each contractor must submit with his bid a sworn detailed financial statement as of a date within the preceding two months; also, a list of all work completed by him during the preceding four years, with the names and addresses of the owner or owners; also, a statement showing incomplete contracts on hand and their present status, and when the same will be completed; and also, a certificate to the effect that he has complied with the N. R. A.

All bidders are particularly advised that they must comply with all provisions of the Contract entered into between the City of Atlanta, Georgia, and the United States, pertaining to labor employment, etc.

All successful bidders will be required to give the usual statutory bond conditioned to pay for all labor and material used in the construction of said building.
Frank Wilson, Secretary of Building Committee.
L. A. Walker, City Purchasing Agent.
For City of Atlanta, Georgia.

Bids close Jan. 16, 1934.

WAR DEPARTMENT. Office Constructing Quartermaster, Fort Bragg, N. C. Sealed proposals in triplicate will be received until 10:00 A. M., E. S. T., January 16, 1934, and then publicly opened for the construction and completion of One (1) Administration Building, at Fort Bragg, N. C. Plans and specifications will be furnished upon deposit of certified check in the amount of \$20.00 made payable to Treasurer of the U. S. Information at the above address.

Bids close Jan. 19, 1934.

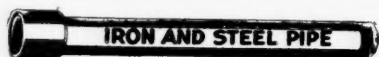
WAR DEPARTMENT. Office Constructing Quartermaster, Fort Bragg, N. C. Sealed proposals in triplicate will be received until 10:00 A. M., E. S. T., January 19, 1934, and then publicly opened for the construction and completion of one (1) Dispensary, at Pope Field, North Carolina. Plans and specifications will be furnished upon deposit of certified check in the amount of \$10.00 made payable to Treasurer of the U. S. Information at the above address.

Bids close Jan. 19, 1934.

WAR DEPARTMENT. Office Constructing Quartermaster, Fort Bragg, N. C. Sealed proposals in triplicate will be received until 10:00 A. M., E. S. T., January 19, 1934, and then publicly opened for the construction and completion of Two (2) Garages and One (1) Office Building at Fort Bragg, N. C. Plans and specifications will be furnished upon receipt of certified check in the amount of \$20.00 made payable to the Treasurer of the United States. Information at the above address.

RESALE DEPARTMENT

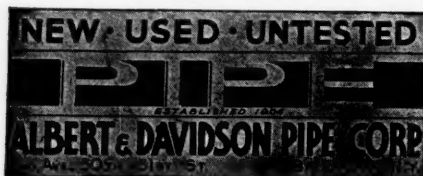
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40,000' Pipe, 3"; 35,000' 2 1/2" and 2".
4-27 E Pavers, overhauled.
2 Roadbuilding Plants, complete.
Rollers, Pumps, Finishing Machines, Shovels,
Cranes, Tractors, Bulldozers, Cr. Wagons, Bins,
Bulk Cement Plants.

J. T. WALSH
Brisbane Bldg. Buffalo, N. Y.

PUMP and MOTOR FOR SALE:

One used Goulds, figure No. 3330, 6-in, 3 stage, Centrifugal Pump. 750 gallons per minute. 1750 R. P. M. 468 foot head. Direct connected to a 125 H. P. General Electric type KTR. 3 phase, 60 cycle, 2200 volt induction motor. Rated 40 degrees Centigrade. Continuous operation. Complete with oil starter switch and 100 feet armoured cable.

All the above in good condition and ready for immediate delivery. F. O. B. Palm Beach, Florida. For further information write:

P. O. Box 899, Palm Beach, Fla.

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Saving money on your purchases is equally as important as making a profit on your products. Investigate the money saving possibilities afforded to all who

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Engine Generator Sets—220/440—3/60

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40 KW Ridgway 220 volts A.C. Generator direct connected to Ridgway Engine.
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150 KW Triumph 220 volts D.C. Generator, direct connected to Skinner Engine.
200 KW GE 220 volts; D.C. Generator, direct connected to Skinner Uniflow Engine.
30 H.P. Plain Vertical Boiler, ASME 130 lb. pressure. Price \$300.00.
30 H.P. & 40 H.P. Scotch Marine Boilers, 100 lb. ASME.
Also Air Compressors, Boilers and Machine Tools of all kinds.

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2-200 amp. General Electric Welders; direct connected to General Electric A. C. Motors. Guaranteed condition.

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36-12 yd. Western Air or Hand Dump Cars
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New and Relay Rail, all weights, C/L or tonnage Lots.

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Let us know your needs. We may have material in stock near you.

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New Frogs and Switches at low prices.

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Will Sell For Quick Turnover

at attractively low prices, special lot relaying rails from 25 to 60 lbs. inclusive. Excellent condition. Write

GARSON IRON & STEEL CO.
NORFOLK, VIRGINIA

Boilers—Air Compressors— Machine Tools— Electric Motors—Pumps

O'BRIEN

MACHINERY COMPANY
113 N. Third St., Philadelphia, Pa.

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3 — 600 KVA Pittsburgh Trans- **\$650.00**
formers, 60 cycle, 6600-2200 volts. EACH

We carry a complete stock. Write for Catalog No. 127-E

All transformers guaranteed for one year.

THE ELECTRIC SERVICE COMPANY, Inc.

"America's Used Transformer Clearing House"

Station M. Cincinnati, Ohio



Super Manga Iron.—The Robins Conveying Belt Company, New York, is distributing Super Manga Iron Bulletin No. 87, describing an alloy cast iron which the company has recently developed and which is said to show remarkable results in applications where abrasion-resisting is a necessary quality.

Chain Belt President Dies

Clifford F. Messinger, president of Chain Belt Company, Milwaukee, Wis., died suddenly at his home on the night of December 12. Mr. Messinger was born in New Haven, Conn., in 1889. He entered the service of the Chain Belt Company in 1911 and in 1913 became advertising manager. He was then successively: sales manager, general manager, vice president, and president, being elected to the last named position in December, 1930. At the time of his death, he was a director in a number of companies and was president of the Milwaukee Metal Trades Association.

John Corwin Vance

Following a brief illness, John Corwin Vance, president of John C. Vance Iron & Steel Company, Chattanooga, Tenn., died at his home on December 17, at the age of 78. In addition to heading the South's largest iron and steel distributing business, Mr. Vance was president of the Hermitage Portland Cement Company, and was a prime organizer of the Dudley Bar Company of Birmingham, handling reinforcing concrete bars. Other business enterprises also claimed his attention.

Electrical Equipment

MOTORS—GENERATORS—STARTERS

59 motors from $\frac{3}{4}$ to 178 H. P.
Write us for price lists.
W. S. Shaw, Trustee, 640-660 Front Ave., N.W.
Grand Rapids, Mich.

BOILERS

For Sale Cheap

2—250 H. P. Franklin water tube boilers, 150 lb. pressure.

United Iron & Metal Co. Inc.
Catherine St. & B. & O. R. R.
Baltimore, Md.

Wage Discrimination

(Continued from page 13)

South we use two to two and one-half times as much labor to produce a thousand feet of lumber as used in the Northwest. On this basis if we are to have a minimum wage of 24 cents per hour, the Northwest should have between 50 and 60 cents per hour in order for the two sections to have the same amount of money for labor invested in a thousand feet of lumber."

F. W. Dugan, Dugan Lumber Co., hardwood manufacturers, Memphis, Tenn., does not believe that there should be any differential in wages between the North and the South as he writes that:

"It is necessary to have customers who have purchasing power. We think if the manufacturers in the South paid higher wages, so their employees could be consumers as well as producers, the whole country would be benefited. We have been manufacturing lumber for 20 years. We have paid the highest wages and we always had the best employees and in our observation, where low wages were paid, they had a low class of labor and they were always having trouble keeping labor, because the better element always found employment elsewhere for more money."

BOILERS FOR SALE

3—200 H.P.; 200 lb. steam pres. built by Heine Safety Boiler Co., $3\frac{1}{2}$ " tubes, single drum, equipped with twin safety valves, fire box $7\frac{1}{2}$ x $10\frac{1}{2}$ x 4' with Copes feed water regulator for each boiler.

W. M. Wiggins, City Manager
Wilson, N. C.

STEAM PUMPS

FOR SALE

12 Snow duplex steam pumps suitable for any large plant. For further particulars, write.

Ohio Iron & Supply Co.
P. O. Box 193 Lima, Ohio

Brown & Co., Inc. REALTORS Chattanooga, Tenn.

The eyes of the Country are now centered on Chattanooga and the Tennessee River Valley. We have for sale or rent, manufacturing sites, retail or warehouse sites, in fact land for any purpose. For further information write Brown & Co., Inc., 736 Cherry St., Chattanooga, Tenn.

SALE OF FACTORY BUILDING

Sale of New Factory Building located at Bedford, Virginia, on main line of Norfolk & Western Railway.

Property consists of four acres of land with new, large Factory Building of modern construction erected thereon. Main building 75 x 350 feet. Toilets and wash rooms 26 x 78 feet. Office 37 x 103 feet. Space of toilets, wash rooms and office is in addition to space in main factory. Building cinder block construction, stuccoed. Concrete floor in entire building, except office. Building well lighted by large windows and sky lights. Siding leading from Main line of Norfolk & Western Railroad to building.

Ample hydro electric power and water. Rates reasonable. Tax rates low. Plentiful supply of native white labor, intelligent and economic, available.

Private offers will be considered. Terms reasonable.

For further information write

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GOOD USED EQUIPMENT

We are offering the best in Good used Equipment for Industrial plants of all kinds, from the Old Hickory Powder Plant as well as other plants purchased by us recently. Let us quote. Our prices are always money saving.

Just a few of our many offerings:

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1—300 H.P. Heine; 3—250 H.P. B. & W.; 4—600 H.P. Edgemoor; 1—250 H.P. Marine; 9—150 H.P. H. R. T.; 1—200 H.P. H. R. T.

ENGINES

1—1500 Cross Compound Corliss; 2—350 H.P. Nordberg; 1—300 H.P. Lane Corliss; 1—12x10 American Ball duplex; 1—80 H.P. Ames Automatic; all sizes vertical engines, 5 to 60 H.P.

CENTRIFUGAL PUMPS

5—16" turbine driven; 2—14" turbine driven; 3—14" motor driven; 4—8" turbine driven; 1—10" Goulds; 2—8" Goulds; 1—6" Goulds; 2—5" Goulds; 1—4" Goulds, all motor driven; all sizes belted centrifugals from 4" to 10" in various types, including several dredge and sand pumps.

STEAM PUMPS

50—Steam pumps, single and duplex; tank pumps, boiler feed and general service pumps, in all sizes; all standard makes and in perfect condition.

MOTORS

100—Electric Motors, slip ring and squirrel cage; 220, 440 and 550 volts; sizes range from $7\frac{1}{2}$ H.P. to 300 H.P. With or without starters; all standard makes and perfect condition.

TANKS

200—Steel Tanks, various sizes, for pressure and storage; all in good condition. Send for list.

CHEMICAL EQUIPMENT

Still, columns, autoclaves, centrifugal wringers; nitrating units; benzol recovery equipment; ammonia recovery equipment; towers, acid eggs; acid pumps and miscellaneous equipment of all kinds. Send us your inquiries.

PAINT AND PIGMENT PLANT

1—Steam Jacketed, ribbon conveyor Mixer; 1—Day 20" Paint Mill; 1—Kaestner 42" Buhr Mill; 1—Aero Pulverizer; 1—Hardinge 8' x 30" Pebble Mill; 1—Raymond 4 roll high side Mill; 4—Agitators and Mixing Pots.

PULP AND PAPER MILLS

We have just purchased equipment for a pulp plant, including digester and diffuser building, with capacity of 100 tons pulp per day. Detail information on request.

Complete 50 ton pulp mill with wood room, caustic recovery, digester, tanks, power plant, etc. Also beater, Jordans, stuff pumps, 72" wet machine, 60" Fourdrinier, calenders, winders, etc.

BRIQUETTING PLANT

Complete 40 ton per hour capacity Briquetting Plant with Komareck Presses, Rutledge fluxer and mixing equipment. Practically new.

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Complete line of General Equipment, Boilers, Engines, Generators, Pumps, Heaters, Tanks, Blowers, Fans, Machine Tools, etc. Write for details.

**NASHVILLE INDUSTRIAL
CORPORATION**
OLD HICKORY, TENNESSEE

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Iron and Steel

(Continued from page 26)

York, and 350 tons of various sizes for Fort Meade, Maryland.

The National Cast Iron Pipe Company closed 400 tons of pipe and fittings for Norris, Tennessee, and the McWane Cast Iron Pipe Company secured from Fort Monroe, Va., 200 tons of 12" pipe. New inquiries are increasing.

Birmingham production has been more active than for some time. Pig iron output has already exceeded the total of 1932, while coal and coke show material gains. Due to the activities of the large plants, such as Gulf States Steel Company, Tennessee Coal, Iron & Railroad Company and others, capacity was increased to more than 52 per cent.

The Tennessee Coal, Iron & Railroad Company announced the opening of its rail mills with the further statement that orders in hand will insure their operation for months to come.

Official Changes

Edward R. Stettinius, Jr., formerly of J. P. Morgan & Co., and more recently Vice-President of General Motors Corporation, has been appointed Vice-Chairman of the Finance Committee of the U. S. Steel Corporation.

F. W. Waterman will retire as Chairman of the National Steel Tube Co., and be succeeded by Benjamin F. Harris, President of the Oil Well Supply Company.

Heating and Ventilating Exposition

The Third International Heating and Ventilating Exposition will be held at Grand Central Palace, New York City, February 5-9. Like the Chemical Exposition, the Heating and Ventilating Exposition is biennial, and in its field is comparable in significance and effect. Registered attendance at the Chemical Exposition by 33 per cent. This is pointed to as indicating a decidedly upward trend in business and industry. The success of other recent trade expositions at the Grand Central Palace seems to confirm this trend.

Petroleum Exposition

The Eighth International Petroleum Exposition will be held in Tulsa, Okla., May 12-19. This is a non-profit educational institution founded in 1923 and owned by the Petroleum Industry and manufacturers of equipment for the industry. William B. Way, Tulsa, Okla., is General Manager.

• DIRECTORY

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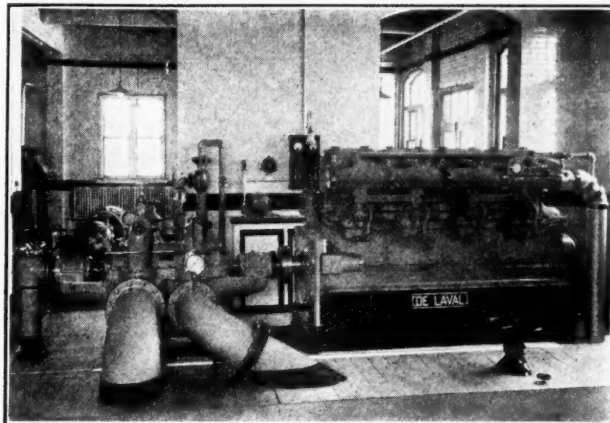
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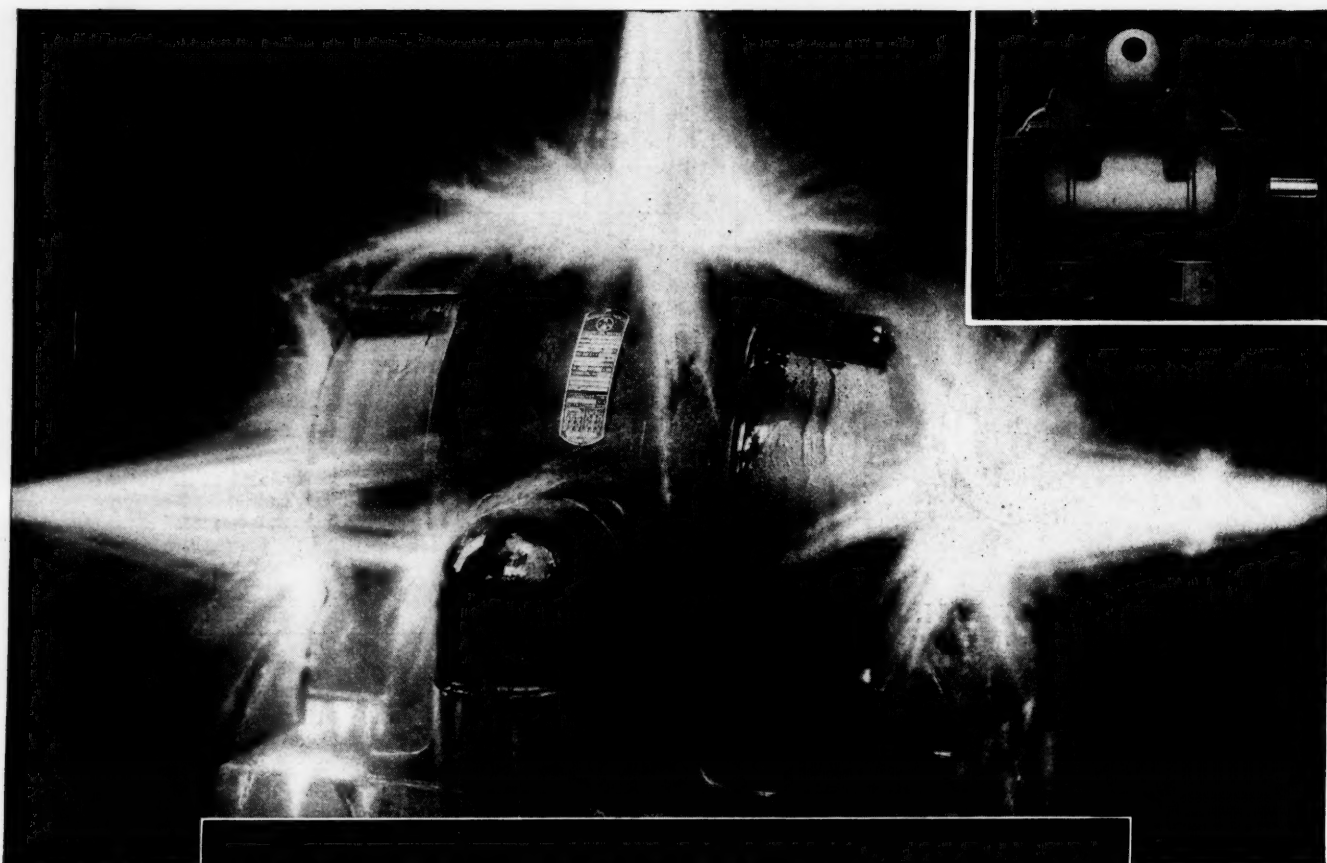
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